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- A10AV12 - Home Cinema Choice February 2011



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Invariably associated with George Lucas and Star Wars, the THX certification programme represents an aspiration for many home cinema fans. So testing a THX-certified 3D TV from LG filled us with excitement.



Read all about it and get the background straight from THX starting on page 42, then find out about the eagerly anticipated Blu-ray release of Star Wars on page 11!

Also in the forefront of display technology, Samsung reveals the secrets of its massive R&D operation on page 22 (and yes, it was cold in South Korea in December, thanks).

Elsewhere we have some seriously stunning kit for you to savour. including sexy speakers from KEF, Klipsch and Tutondo, pretty projectors from ViewSonic, Sony and Casio, and a group test of delicious designer TVs. All that, plus an unmissable guide to the mysteries of Video On Demand – that's downloading your movies from the web. That's Home Cinema Choice for you ahead of the technology curve, as always!

> Chris Jenkins The Editor

TEAM HCC

Chris Jenkins: # Our ISF-calibrated Editor used to run Future's **Tech Laboratories**

HCC's Prod Ed. is new to the

mag, but a stalwart figure of

Jili Lubetkin:

the AV department



Mark Craven: HCC's Deputy Editor cut his teeth on the Sub's bench for five years

Has been invested with the

much-coveted white coat

of HCC's Tech Labs



Anton van Beek: News Ed. Anton began his pro-videophile career over 11 years ago



John Rook: Art Editor John first worked on HCC back in 1999, when TVs were made of wood







ESSENTIAL BUYER'S BUYE

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Double decker

High-end specialist Runco brings its mammoth 3D projector to Europe



CO-STARRING

This issue's team of expert writers are the best qualified in the business

John Archer:

The UK's most experienced TV tester cut his teeth as an early HCC staffer



Richard Stevenson: Industry veteran and former Editor of UK CE trade journal ERT

Martin Pipe: Technology specialist Martin co-developed *HCC*'s Tech Lab operation



Steve May: HCC's former Editor-in-Chief is one of the UK's most respected AV journos

Films

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HCC scours the internet for

the best video-on-demand

services



Adrian Justins: Made his name as the editor of What Video & TV and What Home Cinema



TECH LABS

Our guarantee to you:

Equipment reviewed in Home Cinema Choice is measured and quantified by Future Tech Labs, which for more than 15 years has set the standard for independent AV test & measurement. The findings of the Tech Labs are used to underpin the subjective opinions of our Reviews team, ensuring that you receive the best possible advice when it comes to planning your next purchase

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Dead Space: Aftermath Ip Man 2 (BD)

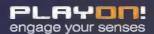
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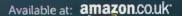






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BULLETIN

→ News highlights PANASONIC Prototype 3D user interface unveiled RUNCO High-end cinema PJ STAR WARS The Blu-ray you've been gagging for gets September release DTS New Neo:X processing delivers 11.1 audio DISNEY House of Mouse raids archives for 3D Blu-ray TALKING HOLLYWOOD Oliver Stone, Michael Mann and Baz Luhrmann chat AV at CES AND MORE!



Described as 'not just another game device, but the launch of a new entertainment era,' by President of Nintendo Europe, Saturo Shibata, the autostereoscopic 3DS handheld console will be arriving in the UK and Europe on March 25, priced around £220. The Japanese gaming giant has also confirmed that it is teaming up with Sky and Aardman Animations to produce short-form 3D content for the device, and is also in talks with Eurosport to provide 3D material.

HCC Online...

Looking for breaking AV news, blogs, features, & reviews? For your daily fix visit us at www.homecinemachoice.com Follow us on Twitter @hccmag



High-end home cinema specialist Runco introduced Europe to its debut 3Dimension Series stereoscopic projector at the recent ISE 2011 trade show in Amsterdam. Utilising CSV (Constant Stereoscopic Video) architecture to enable seamless decoding, syncing and merging of stereo images, this double-decker projector promises to deliver 'a constant HD image to each eye without flicker.' The brand's VP of marketing, Jennifer Davis, goes further, claiming the 3Dimension 'produces an incomparable 3D experience in home cinemas that surpasses the public-cinema experience.' The D-73D ships with two pairs of passive glasses and Runco's 3Dimension Processor. A UK price has yet to be confirmed, but the US price is \$50,000!

Partner with...

Ploneer BDP-LX54 3D Blu-ray player £400 approx



Pioneer has finally entered to 30 Blu-ray market with its latest LX-branded player. Features include DTS-HD MA and Dolby TrueHD decoding and bitstream out, audio/video/photo streaming via wired home networking or wireless (via an optional dongle), twin USB inputs and Pioneer's PQLS (Precision Quartz Lock System) anti-jitter tech. Meanwhile, gold-plated terminals and drive stabilizer ensure it lives up to the luxury LX branding. www.pioneer.co.uk

Panny puts its 3D users first

Prototype tech hints at the future of graphic interfaces

Panasonic has developed a fully functional 3D user interface that could revolutionise the way people use and interact with 3D TVs. The Innovative GUI comes not from engineers in Japan, but is the work of a small development team from the Panasonic's Cupertino-based San Jose Research and Development facility.

Senior engineer Yue Fei and graphic designer Jae Jung say they set out to effectively re-imagine what a 3D TV user interface could be like. 'We've tried to bring a sense of depth to the navigation process,' Fei told HCC. 'We wanted to not only make the user experience more intuitive, but also allow people to look at the history of their commands, stretching (literally) backwards into the screen. it's a different type of screen interface.'

After just a few minutes use, it's easy to imagine how the approach could fundamentally change the way we all engage with 3D. imagine browsing your film or music collection via a virtual Rolodex; your media, complete with artwork and metadata, presented as cards falling out of or into the screen. it's seriously cool.



Fei (right) and Jung: The duo set out to re-invent the UI



File fallout: In 3D, at you

separate folders appear to drop out of the screen

A new type of control

Not only does Panasonic's prototype 3D interface innovate graphically, the duo from Cupertino have also rewritten the rule book when it comes to the remote handset. Out go the tired, clickable buttons of the traditional remote, and the idea of a power-consuming touchscreen panel is also jettisoned. instead there's a handheld pointer, which simply uses a smooth, pressure sensitive pad which you stroke and tap with your thumb. Simple swipes navigate you left, right, up, down plus back and forwards.

Yue Fei and Jae Jung confided to HCC that they have only been working on concepts for forwardthinking 3D interfaces for six months, although the R&D lab has been in business for four years. 'Our activities are not concentrated solely on UI development,' says Fei. 'We aim to bring innovation to a very broad product portfolio, using



emerging technologies.' interestingly, the prototype featured here is a bespoke design created for the aviation industry. it's the familiar backseat in-plane entertainment menu reworked for 3D. Travelers can see their flight progress represented by a dimensionalised trajectory; movie and music

choices flip forwards and backwards, and so on.

That this Ui has been created to impress the aviation industry perhaps hints at another, equally exciting story yet to be told. With no-glassesrequired screens popping up on everything from camcorders to games consoles throughout the CES, it's not difficult to imagine the tech moving onto the back of aircraft seats. The small screen and directional nature of these display makes them ideal candidates for parallax barrier 3DTV.

Fei says the in-flight 3D UI was put together in just a few months, but even so it looks wonderfully polished. Much of its cute charm belongs to the artistry of Jung. it's bright and breezy with a contemporary manga feel. That it's been produced on the Panasonic watch is extraordinary, given that the Japanese giant traditionally takes a far more conservative approach to such things.

Neither Fei nor Jung know when, or indeed, if their work will be commercialised. They say their job is simply to conceptualise. But if all 3D TVs suddenly sported this kind of interface. maybe evened hardened cynics would warm to the technology.

Innovation: The graphics possibilities of the new GUIs could revolutionise AV control

Playlist...

Team HCC reveals its Playback picks of the last month

The Last Lovecraft



Three geeks tackle supernatural terrors in this Buffy-style homage to the Cthulhu tales of HP Lovecraft, CJ

ssault on Precinct



John Carpenter's second movie features a kick-ass soundtrack and a lean, mean script, MC



Nadine Labaki's study of the lives of ordinary women in a Beirut beauty salon isn't as sickly as you might expect. JL

Buried (Region B BD)



This terrifying cinematic experience of a man trapped in a coffin is a must-watch. KG



Although not half as clever as it thinks it is, Christopher Nolan's latest is still a joy to revisit on Blu-ray. AvB

Talkback

Team HCC reveals its thoughts about the home cinema market



MC: it's good to see DTS launching a new technology for dedicated home cinema fans. it's a

company we all love, but there's only so many two-channel PC solutions I can get excited about. With Neo:X, it will be Interesting to see which receiver brands adopt it in their 2011 ranges. For instance, Denon currently offers Dolby Pro-Logic IIz and Audyssey DSX on its AVR-4311. Will its successor pack a third post-processing technology? And will Dolby fight back with an 11-channel version of its Pro-Logic IIz tech? Maxing out at 9.1 now looks a bit outdated.



CJ: One of the biggest issues for the home cinema fan is the size of speaker system he

can accommodate. There seems to be a feeling that 'her indoors' will only tolerate a certain number of speakers, or amount of cable – hence the trend towards soundbars, 2.1 systems, or wireless rears. But *HCC* says, bring it on! Whether it's 7.1, 11.1, or 11.2, the more channels, the better! All we need now is for the Blu-ray manufacturers to support us by giving us the multi-channel mixes we need – DTS-HD MA can provide upto 2,056 discrete channels, so why stop at 7.1?

DTS reshapes its soundfield

Neo:X expected to find favour among AV enthusiasts

A new post-processing technology from DTS that crafts 11.1 sound from 2.0, 5.1, 6.1 or 7.1 mixes will debut on AVRs later this year, following in the footsteps of Audyssey DSX and Dolby Pro-Logic IIz.

Dubbed DTS Neo:X (which might confuse some – Neo:Xi would've been better, surely), it provides what DTS describes as a 'semi-spherical' soundfield by adding front height/width speakers.

In that regard, it's similar to Audyssey's DSX technology, which launched in 2009 and has found its way onto AVRs from Denon, Onkyo and Marantz. Yet, after speaking with DTS at this year's Consumer Electronics Show (CES), it's clear that the company not only regards its system as superior, but that it will have more appeal to AV-holics.

'To be quite blunt, the people who are going to have the space for an 11.1 system – these guys are DTS fans,' HCC was told by Ted Laverty, business development director for DTS. 'They like to see something that's part of the DTS set of technologies because they know it's going to give them a good experience.

'it's not like we're just fabricating something

to put in extra speakers. We feel it gives a strong, but not too overwhelming presence all over the sound theatre. You feel like you're in the middle of the action.'

To give consumers more control over their 11.1 matrixed soundstage, Neo:X offers three modes – Cinema, Game and Music – which tweak the sound in different ways.
For instance, the Game mode claims to improve directionality



'We have happy consumers and happy studios,' says DTS's Ted Laverty

to heighten the interactive experience.

Neo:X also caters for discrete

height/width output, meaning studios can produce directional cues for these additional speakers that won't interfere with a normal five or seven-channel mix.

Studio support

Beyond launching Neo:X, DTS is also pretty happy with itself regarding the takeup of its DTS-HD Master Audio codec on Blu-ray. Approximately 85 per cent of BD titles ship with DTS-HD MA—so what's the reason for that success?

Laverty explains: 'We have got tremendous support from the studios. They like our tool, they like how we integrate it in their workflows, they like the quality that we give. And also frankly, for consumers, you just whack it in and away you go. So we have happy consumers and happy studios.'

And will we see more 7.1 mixes on BD? Ted

hopes that the stability of the format may push things that way. 'Doing a 7.1 mix is a studio decisions, but we're building a technology footprint for these guys to use. Blu-ray is looking forward to another 50 per cent growth this year. My mum's got a Blu-ray player – it's not just people like me and you!'

CES 2011: AV-holics crowd the DTS stand



Glasses-free



After launching its debut 12 and 20 in glasses-free 3DTVs in Japan last October, Toshiba showed its

prototype 56 and 65in models with integral Imaging technology at CES 2011. Both feature an LED-backlit panel with 4096 x 2160-pixel resolution (4k2k) and the company claims that, thanks to its viewpoint overlay technology, users can even move their heads whilst watching 3D content without compromising the effect. Toshiba has committed to launching autostereoscopic 3DTV models over 40ins in Europe in the coming year.

Tablet controller



Panasonic had its own tablet to show at CES. But unlike the countless others launched at the

show, Panasonic's Viera tablet is no iPad-wannabe. Instead it's very much a walled-garden product designed to extend the functionality of the brand's new Viera Content TV portal and nothing more. Available in three sizes, starting with a 4in mini model, the device allows users to control their TV, watch live channels or browse their media collection. Programmes can be selected and viewed on the tablet, and then 'swiped' onto the main Viera TV. www.panasonic.co.uk

Cambridge Blu



This year's CES saw UK brand, Cambridge Audio, announce the 751BD, it's first 3D Blu-ray

player, which is scheduled to hit stores in spring, priced around £800. Described as 'the best sounding 3D Blu-ray player yet', the 751BD boasts five Wolfson WM8740 24/192kHz DACs, Anagram Technologies' audio upscaling and supports DVD-Audio and SACD playback. Other features include QDEO video processing, two HDMi outputs, 7.1-channel and dedicated stereo analogue outputs, not to mention 1GB of internal storage.

LED peaks



Sony has announced a whopping nine Bravia TV model ranges that will be available very soon.

Sonys says the flagship HX920 range, promises 'peak cinematic performance' thanks to the combination of intelligent Peak LED backlighting, MotionFlow XR800 motion processing and dual-chip X-Reality PRO 2D and 3D picture processing. The HX920 range also supports Sony's Qriocity video and music on-demand service and will ship with two pairs of active shutter 3D glasses and a camera and microphone for Skype voice and video calls.















Premiere

HCC's guide to what's happening in the world of TV and films...

Prometheus rises

Rumours about Ridley Scott's 3D Alien prequel abound. The latest indicate that the film, titled Prometheus, isn't a prequel after all, but may still be set in the same universe. But Scott claims, 'the ideas in this film are unique, large and provocative.'

Web-spinners



Sony Pictures has released the first shot of Andrew Garfield in his Spider-Man costume from the new 3D reboot that hits cinemas on July 4, 2012. And, on close inspection, they appear to reveal mechanical web-shooters, which should keep comic-geeks happy.

Sequels ahoy!

Pirates of the Caribbean: On Stranger Tides may not open at cinemas until May, but it's already been announced that writer Terry Rossio has signed on to write a fifth entry in the series and Johnny Depp has confirmed that he's up for it. Elsewhere, discussions are already starting about a sixth Fast and Furious film to follow April's appallingly titled Fast Five.

Directors share their vision

Stone, Mann and Luhrmann speak out on new technology

'Watching my children and friends looking at a movie on a computer screen with the lights on, with interruptions, trying to multitask, is very depressing to people like me.' So said director Oliver Stone about the impact new technologies are having on the film experience. He was at CES to take part in 20th Century Fox's inaugural Technology in Hollywood: The Director's Vision.

Stone joined fellow filmmakers and 'highdefinition visionaries' Michael Mann and Baz Luhrmann to discuss Blu-ray and other home entertainment technology. Unsurprisingly, all three claimed to be huge supporters of the highdefinition format, with Mann describing it as 'the premiere format to reproduce the work we all do'.

Using a clip from the US Blu-ray release of his 1992 hit The Last of the Mohicans to illustrate his point, Mann claimed that, for him the success of a film lies in its ability to transport a viewer into the action. It really has to do with do you believe it? And i think that visually we are much smarter

than we, in fact, realise. Your brain, i think, is perceiving things that you aren't even aware of, and that all comes down to something as technical as megabits per second and how much resolution there is.'



Mann also sung the praises of the immersive benefits of a large-screen home cinema, likening it to a response he got from Stanley Kubrick when interviewing him in the late '60s regarding the release of 2001: A Space Odyssey. When asked where the best position



Michael Mann: Blu-ray is the premier format to reproduce the work we do

was to sit in the cinema to watch the film. Kubrick responded that 'there are four

seats in the centre of a cinema and if you can't get one of those seats don't see the movie, because they place you right in the centre, and the edges of the screen move off into your peripheral vision and that immerses you in it.1

Comparing the format to actually having a film print in your home, Stone claims that Blu-ray plays a major role in film preservation, especially when contrasted with the more disposable nature of portable media content. 'Blu-ray takes these old films and preserves them in a physical form. it's the best of the last hardware. There won't be any other hardware now. It's going to be on a digital phone or it's going to be on a computer

or a TV screen, but it'il be stored, you'il never have access to physically hold it in your hand like a book or like a vinyl record or like a comic book. I love to coilect and have hundreds and hundreds of Blu-rays, because that will be a very valuable collection in 2050.'

Luhrmann, in turn, sang the praises of the format, highlighting how it allowed him to get

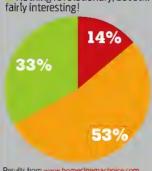
closer to the Three-Strip Technicolor style he imitated with Romeo + Juliet and Moulin Rouge! than the original film prints ever did.

> All for it: Hollywood heavyweights Mann. Stone and Luhrmann love Blu-ray

We asked...

What was your overall impression of CES 2011?

- Great. Plenty of exciting new kit I can't wait to see!
- Boring. It's all tablets, 3DTVs and internet widgets!
- Nothing revolutionary, but still fairly interesting!



Feel the 3D love



Walt Disney Studios Home Entertainment will unleash a spectacular lineup of titles in the

stereoscopic format during the course of 2011, starting with the recent cinema hits Tangled and Tron: Legacy. Meet the Robinsons, A Nightmare Before Christmas, G-Force and Chicken Little are among the other titles that will follow this year, but most intriguingly, the studio will also be bringing 3D versions of The Lion King and Beauty and the Beast to the format, with the former set to arrive day-and-date with the 2D version this Autumn. www.disney.co.uk

Side-by-side joy



JVC unveiled 'the world's first consumer camcorder to offer 3D recording in full HD' at CES. Due to hit

retail in the US this March for around \$2,000, the GS-TD1 uses a high-speed processor to produce two simultaneous 1,920 x 1,080i full HD images. it also has two camera lenses, two 3.32-megapixel CMOS sensors and a 3.5in glasses-free monitor. The newly developed LR independent Format captures full HD 3D, while other shooting modes offered include Side-by-Side 3D and conventional 2D versions of AVCHD. www.jvc.co.uk

Cinematic ratio



Best known for its budget TVs and portable devices. US TV brand Vizio used CES 2011 to

demonstrate 50 and 58in prototypes of its Cinema HDTV line of 21:9 screens. Featuring a 2,560 x 1,080 screen resolution, the displays support passive 'Theatre 3D' stereoscopic playback and include 'Razor LED' backlighting with Smart Dimming LCD panels. The company also showed a proof-ofconcept 71in version behind closed doors. While they are unlikely to appear in the UK, it's great to see another brand entering the world of ultra-wide TVs. www.vizio.com

This month's top 10 news stories in handy, bite-sized chunks...

Brainteaser
LG Display at CES
warned of dire
health
consequences for users
of Active Shutter 3D
eyewear. 'It is not safe to
place batteries and



electronics so close to the brain, 'proclaimed a spokesperson unambiguously. Coming after sister company LG Electronics had unveiled a range of 10 new 3D screens only hours before, five of which use Active Shutter tech, we can only wonder what the warning means for them.

No glasses
Sony demo'd a prototype
autostereoscopic portable 3D Blu-ray
player at CES 2011. The device features
a glasses-free, 1,366 x 768 LCD panel, although
the resolution is actually less than this as it is

broken up by the panel's lenticular filter. Our verdict – the best glasses-less 3D we've seen yet.

They work
Active Shutter
glasses bought with
a Samsung 3D TV
during 2010 won't work
with the brand's 2011
3D TV range. The brand is
embracing Bluetooth sync
emitters in all new 3D

screens. 'There were too many compelling reasons not to shift to Bluetooth,' says Samsung marketing chief Russell Owen. 'Our new 3D glasses auto-sense the 3D signal from the TV. You merely put them on and they work.'

The head of LG Display claims that it is on course to launch a 55in 3D OLED TV next year. Don't hold your breath, though — we've heard brand's make promises about OLED before, and original pioneer Sony has given up on further development, citing prohibitive costs.

Petrolheads throughout the UK have reason to smile following confirmation from the BBC that it will broadcast the 2011 Formula One season in hi-def. 'it's fantastic news that Formula One Management has decided to greenlight HD broadcasts, and we're looking

forward to sharing with the fans all the races in all their detail on BBC One HD and BBC HD, gushed the Beeb's head of HD, Danielle Nagler. Now we'll get to see how craggy Bernie Ecclestone's face really is... Philips opts for app
Philips has joined the likes of Pioneer and Denon in offering an iPhone/iPad/iPod Touch App to control its hardware. The new Wi-Fi TV Remote app works with all Philips NetTV compatible sets and can be downloaded free of charge from the Apple App Store.
The App gives users control of basic TV features such as volume control, channel-hopping or turning the TV on and off, plus more advanced control of Philips' Net TV portal.

Dolby addresses PC users
Dolby has unveiled a suite of audio
technologies designed to enhance
entertainment sound on PC platforms,
including one – Dolby Home Theater v4 –
aimed mainly at movie viewers. 'increasingly the
computer is becoming a central entertainment
hub through which music, movies, and games
are enjoyed,' stated Ramzi Haidamus, executive

VP, sales and marketing, Dolby Labs. Smart TV manufacturers might argue with that.

Panasonic is in the process of completing the takeover of Sanyo. The company already owns an 80 per cent share in Sanyo, and the remaining shares will be de-listed from the

Tokyo Stock Exchange on March 28, paving the way for Panasonic to snaffle up the rest.

AVR sweetener
Pioneer is offering a free 3D Blu-ray player to customers who buy one of its mid-range or high-end 3D Ready
AV receivers. Those who splash out on a VSX-2020 will get a free BDP-430, while those who step up to either a VSX-LX53, SC-LX73 or SC-LX83 will get a free BDP-LX54. This tasty deal ends on Feb 28, though, so you'd better hurry. Visit www.pioneer.co.uk for more details.

We have no Piranhas
A Blockbuster customer was
refused permission to rent a copy
of the Piranha 3D Blu-ray for, erm,
health and safety reasons. Mayor of Peterborough,
Keith Sharp, was told that it was against company
policy to allow him to rent the disc, after

Blockbuster staff mistakenly thought a company ban on hiring out 3D glasses, due to hygiene risks, included the film as well! The Mayor can read our review of Piranha 3D on p89 to see what he missed...

Web chat

Posters raced to the HCC website to share their thoughts on the news that Formula One is going HD...



Pole position

'It's about time really. Now it'll only be another 10 years before we get to see it in 3D. It's such a pity really that Formula One broadcasting technology can't keep pace with that of the cars!'

It's the pits

'It will be 1080i... but I bet it won't be 5.1 Dolby Digital. This is where I think FI should be. The sport is leading-edge and has a huge audience, so let them have the best. But no, that 'orrible fella Ecclestone won't invest!'

Speedy service

Tremember watching an interview Eddie Jordan did with Bernie Ecclestone during one of the race weekends last year, where he asked about the possibility of 3D broadcasts - as (LG i think) was shooting some test footage at the track that weekend. Bemie made some sort of comment about 3D not being on the radar at the moment and that hi-def was a more pressing concern. Even with this fairly major hint, I figured we could still have to wait until 2012 for the infrastructure to be in place. Thankfully, that's not the case – great news!'

'And I agree with the you that getting the audio up to par with 5.1-channel broadcasts should be the next step, before anybody starts thinking about 3D screenings'.

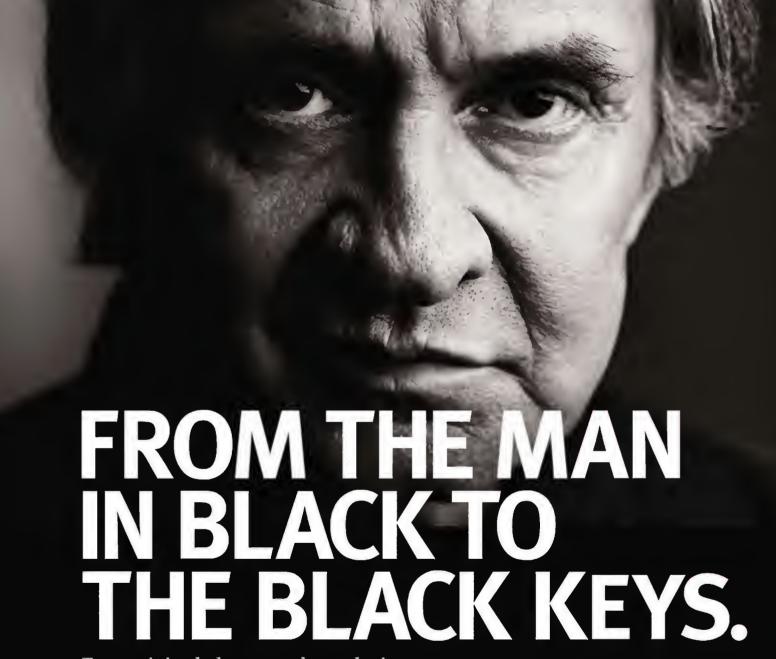
Hi-def roadblock

'Great news, but Freeview HD isn't much use to me as I'm In Kent and we aren't getting it until 2012. This really bugs me as I am close to the London area and will have to get satellite now. Humph!!'

Chequered flag

'I just hope they do a good job of the hi-def broadcast. I'm really not bothered about 3D at all'.





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POINT OF VIEW

Chancellor **Richard Stevenson** says spend, spend, spend on new AV kit because your money is losing value all the time

he UK is in the grip of the worst financial crisis since the Great War and, as another famous ponytailed redhead once sang, 'money's too tight to mention'.

Ironically, there has never been a better time financially to refresh, update and upgrade your home cinema system, and this is what you need to tell the wife to justify the splurge:

We have an economy based on paper money and this is the root of the problem. Pound notes (well fivers and tenners) are not like gold which you can buy, own, bite knowledgeably to check it's not chocolate, and exchange for goods and services worldwide at a fairly consistent rate.

The value of the paper pound is a promise to pay the bearer and promises are easily broken, and very likely, will be this year by Mr Cameron, Mini-Me and the Bank of England.

As a team they are printing money
— or 'quantitative easing' as it is known to
people with stern looks and half-rim glasses.

But printing money doesn't actually
make the country better off because
the net worth of GB PLC remains
unchanged. If the country's net worth is a
£10 hill of beans and you print another 10 pound
note, then the hill of beans is now worth 20 of
your newly devalued pounds. The pound note in
your pocket will now only buy you half as many
beans as it did before. Do'h!

Number-crunching

Still with me? Good, because it gets worse. If you have £1,000 in the bank right now it will earn next to no interest as the base rate is ridiculously low. As the government pumps cash into the system, your original £1,000 is devaluing daily in real terms. When real inflation (not the comedy figure the Bank of England wheels out each month that excludes everything except quails' eggs) hits 5 per cent, for example, your £1K of savings will only buy

you £950 worth of goods worldwide. So what's the solution – spend it now!

So what about investing your grand in more tangible assets such as gold? Good idea in theory but lets go back to the hill of beans. If you buy £1,000 of gold today its real value (like our hill of beans) remains constant, but its value in pounds will be increasing as the government prints money. It might eventually be worth £2,000 on paper, but that won't actually buy you any more goods worldwide. Worse still, you have shown a profit of £1,000 so the government is going to fleece you for up to 40 per cent capital gains tax. This leaves you with £1,600 pounds, which will still only buy you £800 worth of goods worldwide. Again, the solution seems to be to spend it now.

Hell, this ridiculous situation actually makes ludicrous borrowing – precisely how we got into this mess in the first place – seem positively sensible. If you borrow £1,000 right now, the real value of the debt is shrinking every day. What are you waiting for? Rush out and buy something! If any manufacturer would like to get their act together and launch a 50in glasses-free 3DTV, or a Blu-ray player that doesn't take seven weeks to boot up and play a disc, then please call me as my credit card number awaits.

As for the economy, I may speak as someone who got in debt at the age of four by borrowing other people's dinner money to play high-stakes conkers, but I have the solution. In fact, I know exactly what we need to do to get the UK back on fiscal track – hand over the running the of our economy to Blizzard Entertainment, creators of World of Warcraft. Why? Well, after five years, the WOW Gold Coin has suffered zero inflation, all national economies remain healthy and the banks still work – more than can be said for the UK on all three counts •

Thinking of going on a home cinema spending splurge? Let us know by emailing hcc@futurenet.com



Love music? Try the ultimate audio buying guide.



Hi-Fi Choice

Issue 343 on sale now!



DVD ADDICT

As the cut-down A Serbian Film hits DVD and Blu-ray in the UK, **The Beek** finds more candidates for the BBFC's stringent ruling

escribed by its director/co-writer Srdjan Spasojevic as being 'about the monolithic power of leaders who hypnotise you to do things you don't want to do', disturbing horror drama A Serbian Film stars Srdjan Todorovic as Milos, a porn star lured out of retirement by the promise of a major pay cheque. But things go awry when he discovers that the film he's working on means participating in scenes of horrific sexual violence, whether he wants to or not.

What makes A Serbian Film so incredibly shocking and provocative is how good the film looks and that the filmmaker intended high production values. However, it quickly fell foul of the British Board of Film Classification. After watching the film, the organisation demanded an incredible 49 individual cuts across 11 scenes, commenting that, 'a number of cuts were required to remove elements of sexual violence that tend to eroticise or endorse sexual violence. Further cuts were required to scenes in which Images of children are intercut with images of adult sexual activity and sexual violence'.

Some people will see this behaviour as endemic of the BBFC interfering with an adult's freedom and their ability to make a choice about what they want to watch. But, as i settle into a comfortable middle age, I'm starting to think that I'd actually like to see the organisation getting more hands-on with a wider variety of films. With this in mind, I've made up a quick list of films that I really wish the BBFC had got more involved with last year, thereby making my movie viewing in 2010 far more enjoyable...

Sex and the City 2 Speaking as somebody who enjoyed six seasons of SatC on TV, I thought this bloated 146-minute monstrosity was an unforgivable crime against cinema. How different

this could have been if the BBFC had got involved and taken a stance on casual racism and free advertising in films. A strict ban on both would have necessitated the removal of the entire Dubai sequence of the film, leaving fans with a reasonably enjoyable 45-minute film that actually had something to do with relationships and New York City. In other words, it would have made for an average episode of the original series.

Prince of Persia Movies based on videogames are all crap. Fact. They exist solely to extend an existing franchise and contribute nothing at all to society other than engendering a feeling of anger in everybody who sees them. Ban 'em all, is what I say.

The Expendables I like watching a bunch of action heroes blowing stuff up as much as the next man. That's why i watch films like

The Expendables. What I don't like is giving unnecessary characterisation to supporting actors in an effort to beef up their roles and give them a little more screen time. If the BBFC had only stepped in with some sort ruling against scenes of that nature, we would have been spared the horrific sight of pro-wrestler Randy Couture derailing the narrative momentum as he attempts to emote and add depth to his character by making a lengthy speech about his cauliflower ear.

A Nightmare on Elm Street (2010) Had the BBFC refused a certificate to any remakes of films made in the last 30 years, unless they dramatically improved on the source material, then I would have been spared the horror of watching this cinematic travesty •

Should the BBFC exercise more muscle? Let us know: email hcc@futurenet.com





TECH TANTRUM

Barry Fox asks whether he really needs 3D movies and exposes the ambivalence of manufacturers who know the health risks involved

ome of the journalists writing about 3D (self included) have been more interested in the clever technical tricks than the final result. We have been predicting that cinema in the format will be a transient fad, while 3D TV sets will only reach living rooms because mass-produced chip design makes the feature cost more to leave out than build in – as per Teletext.

But Hollywood and the set makers have insisted that 3D really is the next big thing – just as they were adamant that music lovers could not live without the better-than-CD quality offered by Super Audio CD and DVD Audio. And those disc formats were forgotten in favour of worse-than-CD quality from MP3 downloads.

But now doubts are spreading. influential financial and media analyst, Richard Greenfield, of BiTG says 3D is 'not the panacea studios had hoped. Parents are showing increasing resistance to films like the recent *Yogi Bear* and *Gulliver's Travels*, for which 3D's only apparent purpose is to boost the price of tickets by up to 50 per cent. Moviegoers must deal with annoying glasses that substantially dim the light of a movie and which young children spend more time playing with than wearing.'

Couch potato blight

A bad movie is still bad in 3D, while a good one is so regardless of depth. Take House of Wax, Kiss me Kate, Miss Sadie Thompson and Creature from the Black Lagoon from the 1950s; there were all made in 3D but quickly shown only in two dimensions.

Many people cannot see 3D or feel uncomfortable watching for hours with glasses. The set makers are clearly worried about health and safety law suits. Samsung was first to warn about the risks of watching 3D TV. Nintendo has

now posted a website warning about potential harm to children's eyesight, as the company readies the launch of a no-glasses 3D handheld game system. A sliding lever will allow users to switch from 2D to 3D. Nintendo advises users to take a break every 30 minutes to avoid eye fatigue, while Sony posted a similar warning about stereoscopic 3D gameplay on the PS3.

I recently chanced on a weird patent filed in 2008 by LG, who supplies the sets for Sky's 3D pub presentations.

'The invention is for solving the technical problem to (sic) cause dizziness or vomiting when a user sees a 3D image,' explain the four Korean inventors, presumably meaning they want to prevent sickness rather than cause it.

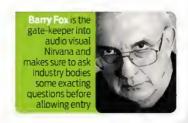
After showing 3D for a long time, the TV set displays a message warning that 'long term viewing of 3D images may cause dizziness or vomiting.' The image on screen then gradually changes to all green or all blue as a firmer warning, before finally morphing from 3D to 2D.

if consumer vomiting or apathy sink 3D, Hollywood may wonder what market research was done, and how, to find out whether cinema goers and home viewers ever really wanted it.

i am suspicious of market researchers, though, having been recently sent a survey on consumer electronics, as part of a British Airways scheme. It asked 'in your opinion, which high-definition DVD format will win the format war?'

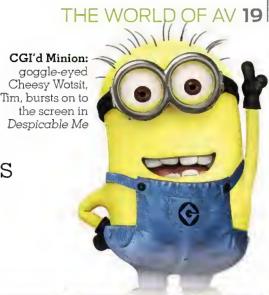
Doh! The format war between hi-def Blu-ray and HD DVD discs ended in February 2008, but BA's research company weren't bothered about out-dated questions. So i was glad that when i completed the survey i confidently predicted that HD DVD would win the format war

Is 3D a winner in your book? Share your thoughts on the format: email hcc@futurenet.com



Tech diary

The world of AV and film changes fast. Our calendar is here to make sure you don't miss out





Demo screen

This issue, we wage war on home cinema systems with the stunning Saving Private Ryan Blu-ray





Saving Private Ryan: 2-Disc SE

Paramount Home Entertainment → All-region BD → £25 Approx Time code: 04.31-26.54

Since its original release on DVD, Steven Spielberg's WWII epic has been the go-to disc for reference-quality picture and

audio, and the film's Blu-ray debut last year once again cemented Saving Private Ryan's position as the de facto test disc for home

cinema enthusiasts.

While the film has plenty of spectacular sequences to feed your home cinema setup, it's the initial Omaha Beach D-Day invasion that really pushes things to the limit. Shot on ireland's Curracloe Beach and employing an army of some 2,500 extras, brought in from the reserve pool of the irish Defence Force, this legendary 22-minute sequence is one of the most relentless and authentic

scenes of modern warfare ever committed to film. As Spielberg himself described it. 'I wanted to be as brutally honest as I could with what we had."

Astonishing AV

Reunited with Schindler's List's director of photography, Janusz Kaminski, Spielberg opted for a 'semi-documentary' visual style for the beach landings, one that would recreate the look of the footage captured at the time by WWII combat cameramen. right down to the heavily textured grain and desaturated colours. And this is something the Blu-ray's AVC 1.85:1 encode handles perfectly, delivering incredible

fine detail in close-ups and an immaculate grain structure.

Even more impressive, though, is the disc's DTS-HD Master Audio 5.1 soundtrack - Spielberg's bravura setpiece features what must be one of the most active soundfields ever created. Eschewing music, it thrives on its inventive and thrillingly immersive sound design, with bullets flying all around you (the sound of them slicing through water is actually a fly-fishing sound effect taken from 1992's A River Runs Through It..) and truly devastating bass accompanying each and every explosion. Home cinema really doesn't get much better than this





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Chris Jenkins travels to South Korea to grill the minds behind the world's largest TV manufacturer

herever you go in Seoul, you can't avoid seeing the Samsung logo. The familiar blue design is plastered all over the South Korean capital and it's not just advertising AV products. As one of the largest of the familyowned, multinational conglomerates with fingers in numerous pies from construction to banking, Samsung is pretty much omnipresent. Its name (meaning 'Three Stars') appears on everything from trucks to apartment blocks.

So it should come as no surprise that Samsung's LCD panel factory in Tangjeong, and R&D facilities in nearby Suwon, are jaw-droppingly massive. The Tangjeong facility alone employs over 9,000 people, and the scale of the buildings is James Bondian – at any moment you expect to see a helicopter flying out of a volcano.

HCC was there as part of a select group of European tech journalists, the only dedicated UK home cinema magazine represented. Our affable hosts from Samsung had lined up a tough four-day schedule of visits and presentations, not only to tell us about the company's new TV models, but also to impress upon us the scale and ambition of its future plans. Needless to say, these extend way beyond the new products announced at the 2011 CES.

Expeditionary force: Chris Jenkins (centre) with members of the European press in Seoul



Life and Seoul of the party

Braving bitter cold and the momentary possibility of a cross-border punchup with the less welcoming North Koreans, our party enjoyed unprecedented access to the Samsung engineers, designers and marketeers who will be responsible for the shape of TV development for the foreseeable future.

Since 2005, when its new CEO decided to make a major investment in panel and processor production, Samsung has been keen to emphasise the 'vertically integrated' nature of its TV business.























In other words, rather than buying in technology or components, it develops and builds everything itself, from processing software to chipsets, panels and completed TVs.

Though there is still some TV assembly done In Korea at the Suwon site, for logistical and tax reasons much of it has been relocated to China and Eastern Europe. (Samsung also uses the brand name PAVV, for a range of products sold only locally.)

The 4.8 million-square-metre Digital City site in Tangjeong is perhaps the ultimate in vertical integration; it incorporates its own water supply, power station, schools, hospital, leisure centre, parks and living areas. You could almost spend your whole life there in the service of Samsung — a prospect which the company certainly encourages, with a typical Far Eastern attitude to company loyalty.

The Tangjeong LCD panel factory has grown from four lines in 1995 to its present eight; along the way it has gone through eight generations of LCD panel design, and will soon jump directly to 11th-generation designs. Plans exist, too, for a glass works and an OLED factory for mobile displays.

Suitably attired in protective clothing, I toured the LCD assembly line to see the whole module

production process, from the bare glass to the substrate and filter coating processes, attachment of the polarising layer, vacuum treatment to remove bubbles, PCB assembly, TAB (Tape Automated Bonding) attachment of ICs, fitting of backlight units, heat-based ageing process, and final inspection and manual testing. If there's one thing that seeing this process brings home to you, it's the immense investment in technology that companies such as Samsung have to shoulder.

Transforming viewing

'Samsung's vision is to create the future of the display industry', I was told. Ambitious, but no other company is in a better position to do so. The tactics seem to be three-pronged: to make 3D more accessible, to evolve the features of Smart TV, and to transform the viewing experience through design feature such as narrower bezels.

I talked to Kevin So, in charge of European Product Planning for LCD, about Samsung's plans for TV technology for 2011.

'Television is changing to become the centre of an entertainment system through connectivity,' he told me. 'The keywords for the next several years are 3D, and Smart TV.'

Having taken 86 per cent of the 3D LCD market in Europe, Samsung quickly established that the >





Digital city: The size of the Tangjeong plant is matched only by the scale of its investment in technology



Screen clean:

The Tangjeong LCD panel assembly lines operate with clinical efficiency

Testing...

Samsung's test and calibration labs get the HCC once-over

Part of the Tangleong plant houses Samsung's test and calibration facility. Simon Lee, principal engineer in the R&D division responsible for TV picture quality, showed me around the test facilities where Samsung's own products and those of rivals are tested and compared.



Test facilities include a 24m³ anechoic chamber used for speaker testing, which doubles as an electro-magnetic field testing facility, and a contrast measurement system in a darkened room, using a video camera mounted on a robotic arm. Other parts of the test lab measure flicker from LCD panels, resolution with sideways-scrolling text, and bright-to-dark transition times using high-speed CCD cameras.

Lee's motion analysis system can measure the effect factors such as plasma decay rate have on performance aspects like 3D crosstalk, and he's in discussions with international committees to establish standards for crosstalk measurement.

A special robot rig has been designed to test 3D glasses; this measures crosstalk uniformity and lens response time, taking hundreds of measurements from a series of test patterns.

Another aspect of Lee's work is using computer-aided design to optimise circuit board layouts; measuring electro-magnetic and acoustic emissions from boards can lead to improved efficiency and cost savings.

HDMi, USB and SD card testing is also carried out, and as *HCC* has discovered for itself, certified third-party devices mostly work fine, but copy protection can cause issues even with properly licensed products.



larger sizes of screens are the most significant in this area. Forty per cent sold are 40 to 42ins, another 40 per cent are in the 46 to 47ins category, while and 20 per cent are 52ins and up.

But the takeup of 3D TV generally has been only 10 per cent of the market – not as much as Samsung expected. 'We can identify several possible reasons for this,' suggested So. 'Lack of 3D content from broadcasters, lack of 3D Blu-ray titles, and shortage of compatible 3D devices among them. But there are problems with 3D TVs, too: viewers can find the glasses uncomfortable, the thick bezel can be distracting and the poor sound of flatscreens can be unsuitable for movie viewing.' Needless to say, Samsung's 2011 range aims to tackle all these problems.

Samsung commissions in-house research from a leading optometrist specialising in stereoscopy, and his conclusions are that most problems with 3D viewing such as headache, eyestrain, double vision or nausea, are caused by the uncorrected eyesight of the viewer.

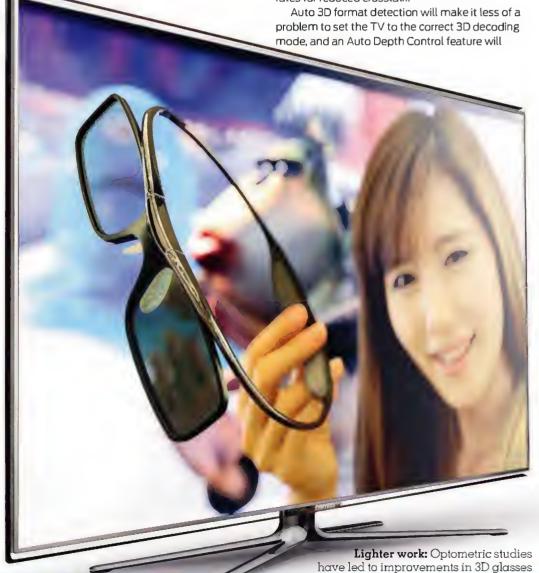
In his words, 'first check glasses, then eyes.' Since 40 per cent of Koreans wear glasses, this is clearly a sensible approach, and Samsung is in the early stages of planning to make prescription 3D glasses available.



Cube for life: The HT-D1700 home theatre system combines BD and 2.1 sound in a bookshelf-sized cube

Making 3D easy on the eye

Another ploy to make 3D viewing more comfortable is the 'ultimate narrow bezel'. Reducing the width of the TV's frame from the current 28mm to a mere 5mm will make it easier for the viewer to ignore the TV itself and focus directly on the 3D image. More important, of course, is the quality of the 3D effect, which will be enhanced by panel technology with faster refresh rates for reduced crosstalk.







Research and development:

Next issue we take you into the secret world of the Suwon R&D centre...

History tour: Samsung has come a long way since this early set preserved in the company museum



reduce eye fatigue by limiting the range of the 3D effect, improvements in the number of 3D depth layers and the pixel search range for effects will deliver more subtle 3D effects with far less judder.

Improving the 3D performance of plasma screens is more of a problem, since brightness is a factor. Everyone knows that plasma screens are less bright than LCD, so the addition of a polarising filter on the glasses leaves the picture too dim.

But improvements in 3D glasses design are also on the agenda. Lighter at 29g, with enhanced lenses for wider viewing angles, wireless recharging, longer battery life, and a Bluetooth sync system replacing the unreliable infrared method, these glasses will be part of a wider range of basic and 'designer' models. These will feature an adjustable nose-pad, a battery in the stem and a wireless charger pod. There's also the possibility of clip-on prescription lenses, so you wouldn't have to wear spectacles.

As for the idea of universally compatible 3D glasses, that still seems to be a bit of a pipe dream.

'It will be extremely difficult to establish a universal standard within the next couple of years," I was told. Proposed solutions such as XpanD's universal glasses got a rather sniffy response, with dark mutterings about quality control, colour tinting and frame decay rate matching.

Enhancing sound

A new audio technology is being introduced to address the limitations of sound quality with flatscreen TVs. Using a 3D software algorithm, which extrapolates a vertical position from the 3D depth, Samsung is introducing '3D Sound Plus'.

This has something in common with systems such as Dolby Pro Logic IiZ, which already add a front elevation effect, but require extra speakers to do so. Samsung's system works with any speaker system, using both the sound playback source and video motion detection to generate

> Setting the bar higher: Samsung's audio technology research has been applied to soundbar products

a virtual vertical element for the front boxes, 3D Sound Plus will be built into several home cinema systems, some of which will have front speakers with an additional driver positioned on top.

Samsung's Smart Hub technology will also be built into its 2011 Blu-ray players. Other features will include enhanced GUis modelled on the TV range, faster boot times (up to 3secs), built-in media servers, models with hard disks and PVR functions, with twin tuners, auto backup and AllShare networking with DMS compatibility.

RE SECRETS FROM

New for 2011...

Some of the Samsung products we'll be seeing soon...



PDP 6900

This range of plasma TVs incorporates the Smart Hub concept with full web browsing, 3D including 2D-3D conversion, Wi-Fi, and Skype HD communication functions



A standalone product, combining a 3D Blu-ray player with a full component-style 120W-per-channel AV receiver, with DTS and Dolby processing and four HDMI inputs



HT-D6750W

This is one of the new generation of Samsung's 7.1-channel home theatre systems, featuring 3D Sound Plus, as well as 3D Blu-ray and Wi-Fi



HW-D7000

BD-D6900

A slimline BD player with full Smart Hub features, wi-fi, 2D-3D conversion, HDMI input, and the One Foot feature for automatic DNL A connection

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Adrian Justins scours the internet to discover the best video-on-demand services





On the screen: The Girl with the Dragon Tattoo is one of LOVEFiLM's most recent additions; classics like The Third Man can be watched for free on Jaman; BlinkBox has new movies like RED available to buy; beyond SeeSaw's free UK content, it also offers US shows like Battlestar Galactica to rent by episode or season

LOVEFILM



What is it?

Europe's biggest online DVD rental company has grown rapidly since its genesis in 2003, and is now owned

by Amazon. It has over 1.4m members, most of them in the UK, who have access to 70,000 titles. It launched the UK's first legal film download service in 2007, which has a strong community element with lots of comments and recommendations.

What's available?

Around 4,000 online movies available to subscribers but only 900 on pay-per-view.

What's the picture resolution?

Standard definition.

What's the cost?

Subscriptions from £5.99 per month (including DVD/Blu-ray rental); pay-per-view online from £0.99 to £3.49.

What hardware do I need? PC; Apple Mac; Sony PS3; some Samsung and Sony Bravia TVs (with internet video); selected Sony Blu-ray decks, Sony and Samsung home cinema systems; Sony network media player.

Do I have to watch adverts? No

How long do I have access to a rental? Viewing must start within seven days, thereafter it can be watched repeatedly within a 48-hourr window. What DRM controls are in place? No copying or moving of downloads allowed. User must be online to watch.

JAMAN



available in the UK.

What is it?

Launched in the US in 2007, Jaman is a cinephile's delight. It specialises in independent and world cinema and

is geared up for HD downloading. It's very popular in the Middle East and India and has a dedicated UK site. Jaman is social-networking savvy with Facebook integration, and the Mood tool is a fun way to match a movie to your current mental state. It can be frustrating, though, because so many titles aren't available in the UK, but you don't know which they are until you try and rent them. What's available? Depending on the rights, movies are available to rent or buy and can be downloaded or streamed. Around 1,000 titles are

What's the picture resolution? HD quality, hence Jaman recommends use of its Jaman Player with downloaded files, rather than streaming content. What's the cost? Rentals from £1.99, purchases from £3.99

What hardware do I need? Jaman Player works on most modern computers, plus the iPad and hacked Apple TVs.

Do I have to watch adverts? Only with the free content.

How long do I have access to a rental? Viewing must start within seven to 30 days (according to the rights) and lasts for 24 hours.

What DRM controls are in place? No copying or moving of downloads allowed.

On the go: Jaman Player works on the iPad





BLINKBOX



What is it? Just three years old, BlinkBox is a UK-based site that has over a million users a month. It offers over 6,000

full-length premium movies and TV shows to rent or purchase outright.

What's available? Some really good movies and TV shows from all the major (and several independent) Hollywood studios, plus plenty of UK content.

What's the picture resolution? DVD quality. What's the cost? Some free shows. Rental prices start from 39p for a TV episode and movies start from £1.89. Purchase prices are from 89p for a TV episode and movies kick off at £1.89. Blockbusters tend to cost around £11 and upwards. You can buy unlimited access to viewing some movies online without actually downloading them.

What hardware do I need to get it? You can watch streamed content on most decent PC and Mac computers (with Adobe Flash), but downloading is for the PC only. Streaming is also available on the PS3 and Samsung @Internet TVs. Do I have to watch adverts? Just one quick one on free stuff, but none on rented or bought titles. How long do I have access to a rental? You can watch unlimited times for a 24-hour period, which starts from the point when you first play the title.

What DRM controls are in place?

Windows DRM prevents any copying or moving of downloaded titles.

SEESAW



content from BBC Worldwide, Channel Four, Channel Five, Universal and MTV.

What is it? There

are no movies on

SeeSaw, which is

a streaming-only

site that launched

last year and draws

its Flash-based

What's available? Over 3,500 hours of free TV and around 1,700 hours of premium rental shows. Recent BBC stuff is reserved for the iPlayer. The site is easy to use, even dimming distracting content on the web page surrounding the stream. What's the picture resolution? There are three quality settings to choose from, but none are better than standard-definition.

What's the cost? Some programmes are free, rentals cost from 49p per episode. The ad-free NonStop option costs £2.99 per month (with no minimum contract).

What hardware do I need to get it? Any decent computer and browser will work.

Do I have to watch adverts? Yes, several minutes worth before each show, except for BBC shows or if you take the NonStop option.

How long do I have access to a rental?

Rent-now-but-watch-later lets you pay upfront for a whole series. SeeSaw saves unwatched rentals for 30 days for individual episodes and 90 days for series. From the moment you start watching an episode, you have 48 hours to finish it.

What DRM controls are in place?

You can't even download a show.

VOD from your box

Your broadaster may offer on-demand content, too

All of the UK's various TV platforms, even Freeview (depending on what kit you have), offer some form of video-on-demand. Cable-based Virgin Media leads the way, offering iPlayer, 4oD, ITV Net Player and Demand Five plus 100s of TV box-sets, around 600 standard-def movies and 50 HD movies. Cost depends on what TV package you subscribe to. Sky's quasi-on-demand Anytime service has around 200 hours of shows and movies available over the airwaves, with the new Anytime+ offering a larger selection of broadband-delivered content at the drop of a hat to Skv+HD subscribers with a Skv broadband package.

BT Vision is a Freeview+ box with the ability to receive supplementary channels via broadband and pay-per-view shows and movies. HD content is a bit thin on the ground, but quite current. How much you pay depends on what package you subscribe to, with a basketful of randomly selected Catch-Up shows costing £1.10 an episode to base package customers. Thankfully, the BBC iPlayer is gradually appearing on BT Vision boxes around the country during an ongoing five-month upgrade programme.

On the screens: Acetrax offers new movies like The Last Airbender; iTunes' most popular download at the moment is The Social Network



Top tip

A broadband

Streaming films?
Then make sure you're up to speed...

connection with a speed of at least 1.5-2Mbps is needed for reasonable performance and picture quality, to stream movies even in standard-def. Some broadband connections may not provide sufficient bandwidth for streaming movies, but you can improve the playback quality by quitting any other video, muslc, online gaming or online file-sharing applications that are running on any internet-connected computers in your home.

Using an Ethernet cable, rather than wi-fi, to connect the TV to the router may also boost the signal. Placing your internet TV device close enough to your wi-fi hub (pictured) to receive a strong wireless signal may also help.

Acetrax



What is it?

A relatively young (born 2010) movie pay-per-view rental and purchase site with no TV shows. If you buy a movie,

Acetrax lets you download a copy, but keeps a copy for you on its servers.

What's available? Its catalogue numbers around 1,000 tiles with a fair amount of recent releases. Some titles are rent-only and some buy-only, but most are both.

What's the picture resolution? DVD quality (576p).

What's the cost? Between £1.99 and £3.49 for rental, £3.49 to £10.99 to buy.

What hardware do I need to get it? Online viewing involves the usual computer requirements. Acetrax is also available on some of the connected TVs (and Blu-ray decks) from LG, Panasonic and Samsung.

Do I have to watch adverts? No.

How long do I have access to a rental?

You can watch a movie for 24 hours as often as you like. The 24-hour period starts after you first start to play the movie.

What DRM controls are in place? Acetrax allows you to watch a movie on up to three registered devices plus the computer on which it is downloaded.

·iTunes



What is it? Apple's online music and video store with rental and purchase options. A decade old, it has slowly but surely increased

its movie selection over the years.

What's available? A broad selection (1,000s) of movies and UK broadcast TV shows including the very latest TV series from BBC, ITV, Channel 4, Five and more. Many titles are in standard-definition as well as HD (with DD 5.1 surround sound). Movies you buy in HD also include a standard-definition version for viewing on your iPod, iPad or iPhone.

What's the picture resolution? Standard-def is 640 x 480p and HD is 1280 x 720p.

What's the cost? Movie rentals start at 99p for standard def, £1.99 for HD. Purchase prices are from £6.99 for SD and just £1 more for the HD version. HD TV shows cost from £2.49 to buy.

What hardware do I need to get it? A decent computer (PC or Mac) or Apple TV to download movies. An Apple TV is needed to view purchases on your TV.

Do I have to watch adverts? No.

How long do I have access to a rental? Rentals last 30 days with a 48-hour viewing window.

What DRM controls are in place? Apple is more flexible than most. As well as watching HD shows on a computer or an Apple TV you can watch everything (in standard-def) on an iPhone, iPad, iPod touch



Love your VOD widget: Samsung's Smart TV portal offers movie streaming via LOVEFiLM.com

Turn on, tune in, VOD out

The major TV brands offer video-on-demand through their Smart TV portals, too

16

The revamped Smart TV incorporates Its former NetCast service into an entertainment portal making it possible to view broadcast TV and connected TV functions simultaneously. These include a fledgling app store and a full web browser. Video-on-demand services are headlined by Acetrax and Viewster for movies plus iPlayer, major league baseball highlights and the ubiquitous YouTube. Picasa and vTuner Internet radio compete with Facebook and Twitter (you can now tweet whilst watching TV). Utilities include Google maps and Accuweather.

Panasonic

Formerly known as Viera Cast, but now re-labelled Viera Connect, Panasonic's Smart TV implementation for 2011 makes a timely jump on the open platform wagon. Its original smattering of services such as Skype, YouTube, Picasa, Eurosport and Bloomberg hardly provided an enthralling experience. At least Acetrax movies and Twitter were added last year and the app store will have the likes of Facebook, eBay and Napster. But the absence of iPlayer is a weakness.

Philips

The Dutch brand has yet to provide a dedicated movies-on-demand service, preferring instead to offer unfettered access to the Internet In general, along with a smattering of portals such as YouTube, tunim.fm online radio seach/playback

engine, Funspot online games, MyAlbum. com for sharing and viewing photos and Box Office 365, which is a subs-driven platform providing content from ITV and the Cartoon Network. NetTV has a feature called Wi-Fi Media Connect, which enables you to display the video and sound from your computer wirelessly on the TV.

Samsung

Like its Korean rival LG, Samsung is adding an app store and full internet browsing in 2011 to its burgeoning Smart TV portal that already includes Acetrax, LOVEFiLM and iPlayer (but whilst the latter offers HD content, the former two's movie services are strictly standard-def only). The likes of YouTube and Getty Images work well, but not all apps work flawlessly. For example, the Rovi TV guide only lists 15 channels (none in HD) and it's impossible to zoom in on Google Maps.

Sharp

Sharp has been so busy promoting the benefits of yellow pixels, it's rather ignored the idea of video on demand, although 2011 will change all that. Up to now its screens with AquosNet have offered home networking functionality but no web browsing, widgets or movie-watching sites whatsoever. Later this year we're expecting a slew of screens to boast dedicated portals such as Facebook, Twitter and Flickr. US models announced at CES have a movie streaming service so it looks promising for something similar in the UK.



Sony

Sony has truly embraced the Idea of delivering home cinema down a pipe to your living room with its pay-per-view Qrlocity movie service, which offers new releases and selected classics from every major studio in HD and standard-definition. After renting a film, you have up to 14 days to start watching, and once playback is started, 48 hours to view the film as many times as you like. Standard-def rentals start from £2.49, HD ones from £3.49. Qriocity is no one-trick pony though; other applications include music, game, and e-books.

Toshiba

Toshiba has been a bit slow in coming to the video-on-demand party with little content available on its TVs so far and no sign of any movie services, but at least it has offered iPlayer and YouTube on some its screens. The company was primed to announce Google TV kit at CES, but the postponement has left its Net TV offering looking a little thin. Still, we're expecting better things later this year

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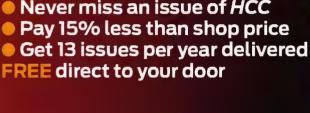
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Sing... if you're glad to be grey

BUSINES

Kit Checklist

JVC: DLA-HD100 D-ILA projector Screen Excellence: 120in 2.35:1 acoustically-transparent screen itics: Kino-Torsion anamorphic lens and actuator Chief: Projector ceiling mount Onkyo: BD-SP807 Blu-ray player Onkyo: PR-SC866 THX Ultra2 Plus-certified 7.1-channel AV controller Genelec: 3 x HT312 three-way in-wall speakers (L/C 6 x AIW25 two-way in-wal speakers (surrounds); 2 x HTS4B active subwoofers active subwoders
Genelec: DI8A Active Balancer
Sky: Sky+HD set-top box
Audyssey: EQ Sound Equalizer
Anchor Bay: DVDO iScan VP50Pro THX-certified video processor scape: 1080p Player; 2x 1U Crestron: CP2E Control System

Crestron: CPZE Control system Crestron: TPMC-8X Wi-Fi touchpanel with external battery pack Widdle Atlantic: 44U equipment rack

and custom shelves

HOME CINEMA CHOICE APRIL 2011



rey isn't usually considered a colour to inspire people — it's far more likely to bring to mind memories of Spitting Image's lifeless and dull John Major puppet than fill you with passion. But if anything could change your mind and generate a whole new appreciation for the hue, it's this monochrome, but nonetheless exciting, cinema room created by Hertfordshire-based pro-install experts FAB Audio Visual.

As an avid film fan, the owner's key requirement for the team was to deliver an immersive cinematic experience with incredible AV quality. And it had to be done according to a strict budget.

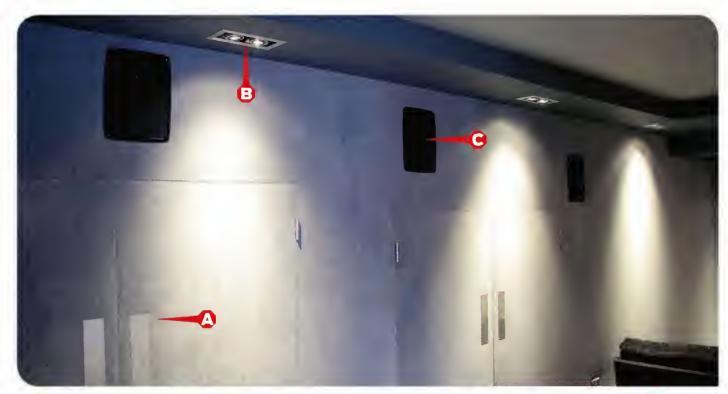
While a room shell had already been constructed before FAB AV got involved, its long, thin shape and the awkward placement of several in-wall cupboards made it less than ideal for a dedicated cinema room. The initial problem was solved by building a false wall at the front, while careful planning allowed the team to use the in-wall cupboards to house both the owner's sizeable DVD/BD collection and Middle Atlantic temperature-controlled racking.

Film fanatic

With the owner stating that the room would primarily be used for watching films, FAB specced JVC's visually impressive and cost-effective DLA-HD100 projector with an anamorphic lens and 2.35:1 ratio screen. Video comes courtesy of a Kaleidescape system, Sky+HD and Onkyo's THX-certified BD spinner. And to really optimise the image quality, the new front wall was trimmed in black acoustic fabric to increase perceived picture contrast and cut down any refracted light. Meanwhile, the side and rear walls were given their distinctive mid-grey finish to ensure that there would be no colouration from reflected light.

As for audio, the 5.1-channel system employs 11 Genelec speakers – including two subs. Soundtracks are processed by Onkyo's PR-SC866, and the system has also been fully optimised by an Audyssey EQ processor using 24 measuring points around the seating area.

The end result is a sleek cinema room that does everything the owner asked for. And the installers' ability to overcome a number of challenges on a strict budget also bowled over the judges at last year's UK CEDIA Awards, where it scooped one of the event's top prizes.





A Interior design

The side and rear walls feature acoustically-transparent grey velour trim over acoustic wall treatments to cancel out reflected sound

B Light it up

The lighting in the cinema room - both ceiling and LED marker lights on the steps - is controlled as part of a whole-house Helvar system

C Wired for sound

The cinema is only configured for 5.1 sound due to the position of two windows and a radiator on the back wall that would have interfered with rear surround speaker placement

D Climate control

The Middle Atlantic 44U kit rack is housed in a specially air-conditioned cupboard, and kept at a constant 21 degrees Celsius

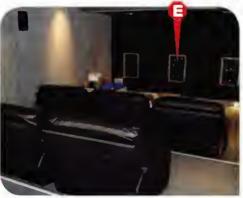
E Wall of sound

A dense block wall was constructed to both shorten the room (thereby correcting some room acoustic issues) and provide somewhere to flush-mount the front speakers and subwoofers

F Step up

The decision to step the floor to accommodate three rows of seating meant that the placement of the in-wall surround speakers had to be staggered to match the height of the seats

G Light box FAB AV's Phillip Warris claims that JVC's DLA-HD100 is an obvious choice for any AV enthusiast thanks to its 'jaw-dropping cinematic picture quality combined with flawless black levels and a real depth of colour'







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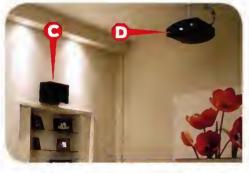
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Every issue, an **HCC reader** invites you to take a tour of their beloved home cinema setup...









3D evangelist: AV-holic thinks we should make the most of the new video technology

Introduce yourself... Corrie Hollingsworth, 39. When did you become an AV-holic?

Back in 1997, through reading *HCC*. At the time I had a Sony Pro-Logic set up, with a 28in Toshiba Pro-Logic TV. I then got a Sanyo LCD projector and it's gone from there.

What's in your current setup?
A Sony VPL-HW15 projector and a 7ft screen, Onkyo TX-NR807, Sony BDP-S370, and KEF 5.1 array. I have a HTPC, too, with approx 520 films ripped onto hard drives, using Windows Media Centre for playback. The system is controlled by a Marantz RC5000i Controller, including the lighting.
What was the last addition?

Just bought the Sony
BDP-S370, to replace the
BDP-S300. I wanted SACD
in my home theatre – I've only
got two discs, though, Pink
Floyd – Dark Side Of The Moon
and Jeff Wayne's War Of
The Worlds.

And what's next?

Maybe a Samsung 50in 3DTV. If not, I may get hold of a 9ft electric screen.

How much have you spent on your AV habit over the years? Someone asked me this recently, and I replied about £17,000 including films, but then when I started to think about it, over the years changing and replacing kit and film formats, it's more like £30,000.

What does your family think of your hobby?

Family and friends love coming over, especially if we have a popcorn night... My wife gets the ice creams.

What's your current fave disc? Avatar. The film quality is unbelievable and the sound is fantastic, too.

Are you excited about 3D? I think Its a major leap forward. I saw Avatar in 3D and was blown away by it, especially scenes in the command centre, where there are 3D-within-3D images, Let's make the most of it!

Room essentials

A Full HD hero

Using Windows Media Centre on his home theatre PC, Corrie can browse his film library on his projector screen

B Reference

The KEF Q5 floorstanders work in harmony with the brand's venerable Reference 100 centre speaker...

C Sound dispersion ...while surround duties are handled by KEF 65DS dipoles

D Picture pusher
Bigscreen hi-def comes
courtesy of this ceilingmounted Sony VPL-HWI5

F Kit cupboard

AV gear, including the Onkyo TX-NR807 receiver and Sony BD deck, is housed neatly in a cupboard under the stairs

Join the club

Do you want to see your home cinema system featured in the pages of *Home Cinema Choice*? If so, log on to www.homecinemachoice.com/avholic where you'll find all the information you need.











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"Absolutely brainsplitting dynamics", Overall: 4/5



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REVIEWS

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Trendsetter keeps old-school ties

LG puts its 3D house in order with a new plasma model, although John Archer still isn't totally happy



G is telling anyone who cares to listen that it's 'Sky's brand of choice' for 3D tellies, and it's been uniquely prolific about offering 3D models in every type of TV technology. So far we've had direct and edge LED, CCFL LCD and even a Passive 3D LCD model to go with the more popular Active ones.

To date only two things have been missing from LG's 3D lineup: consistently enjoyable 3D picture quality in a plasma model. Hopefully this panel will put that right.

As LG's most highly-specified plasma TV, it's no surprise to find the 50PX990 attractively clad in the brand's Infinia design. So there's an enviably slim chassis, while the glossy bezel and screen share the same single plane. A subtle infusion of blue in the bezel's extremities and glass-necked stand further enhances the set's striking appearance.

The 50PX990's connections include, inevitably for a 3D TV, v1.4 HDMIs. But the set is also strong on multimedia aids, with two USBs and an Ethernet jack supporting the more standard D-Sub PC port. The USBs can handle video (including DivX HD) files as well as music and photos, while additionally making the TV Wi-Fi capable via a bundled dongle. The Ethernet enables communication with both DLNA PCs and LG's NetCast TV service.

The latter has been less than impressive in previous reviews, but just before Christmas, LG delivered a hefty system update that finally made the service worth talking about. Highlights of the new content on offer include a good-looking and stable version of the BBC iPlayer; YouTube; Google Maps; Twitter; Facebook and the vTuner internet

> There's no doubt that even the new, improved NetCast still lags behind the best rival online platforms. But, at least, the brand has taken a step in the right direction.

THX-approved

The panel is also the UK's first 3DTV to receive official backing for its performance from independent quality assurance group THX, which claims to have focused on brightness, colour saturations and crosstalk noise in deciding that the 50PX990 is worthy of its support (for more info on THX 3D certification, turn to

Crosstalk's ghosting problems have significantly blighted LG's active 3D LCD screens, and for me remain the biggest hitch to the widespread enjoyment of the format at home.

The 50PX990 also sports a solid 2D-to-3D conversion system for people who are happy to watch a diminished and occasionally disorientating 3D experience. and ships with one pair of Active Shutter glasses included. With extra glasses costing around £100, it's a shame LG couldn't have added

at least another pair. Especially as the TV costs nearly 50 per cent more than Samsung's PS50C6900 50in 3D plasma. But maybe the 50PX990 will justify its price hike elsewhere.

Further features not directly connected to the set's 3D abilities include a full HD resolution, an integrated Freeview HD tuner. so-called '600Hz' sub-field drive technology, and the inclusion within the screen's design of LG's TruBlack filter, for reduced reflections and enhanced black level response.

It's worth noting, too, that the 50PX990 is endorsed by the Imaging Science Foundation as well as THX, with the former lending its name on account of the set's really extensive picture-tuning toolkit. The latter includes a pretty formidable colour management system, as well as extremely flexible control of the set's gamma settings.

Bright star

in action, the 50PX990 is so close to being an outstanding performer that I feel frustrated by it. Starting out with Avatar on 3D Blu-ray, i was immediately, and pleasantly, surprised to find 3D pictures still looking appealing dynamic, rich and bright despite the inevitable dimming effect of the glasses and alternate frame technology, in fact, while they're not quite as bright and colour-rich as the 3D pictures from some LCD/LED TVs, they're definitely >

AV/CV Product:

radio 'tuner'.

Positioning:

Peers:



→ Tech Labs

Power consumption: Watts





White screen: This LG falls behind its peers in energy efficiency

Test footage: This average figure is high, too

TV Contrast: Ratio





Picture: 92,000:1 is an excellent real-world contrast measurement, and one of the best we've measured from a plasma panel

Presets: There's a wide range of colour temperature options. Out of the box we found the THX Bright Room setting to be the closest to 6,500K 0: 8,109K W50: 5,619K C50: 12,152K THX: 6,016K THX Bright Room: 6,317K

Hue and cry:

In 2D mode colours can look a little overcooked, but can be tweaked

Double up: LG

supplies two

for basic

handsets with the TV - one

controls only

punchier than Panasonic's 3D plasma pictures.

it's also great to find that the dreaded crosstalk problem is much reduced here compared with any of LG's active 3D LCD/LED TVs. This immediately makes 3D pictures much more natural and watchable over extended periods of time.

As noted earlier, the 50PX990's 2D-to-3D converter is solid enough (though arguably not as good as Samsung's), but we never really felt tempted to use it.

Switching to 2D footage, the 5OPX990 delivers HD with exceptional sharpness to back up the colour vibrancy and brightness already noticed during 3D viewing. In fact, at times, hues can look a little too rich for comfort in 2D mode. But this can be sorted fairly easily by spending time with the set's colour calibration tools.

Motion is handled nicely, too, provided you don't set the TV's motion processing too high, resulting in acceptable amounts of judder and practically no blur.

Moreover, it's more obvious during 2D viewing that the 50PX990 is very good when it comes to black level response, attaining levels of black richness that LCD and many edge

LED TVs simply cannot reach.

Black levels

With one of LG's better standard definition-to-HD upscaling systems in play, along with a satisfactory audio performance for such a slim TV, you might be wondering why we've only given the 50PX990 four stars for performance.

First, while crosstalk is much reduced compared with LG's active 3D LCD TVs, there's still more of it than you would see on a Panasonic 3D plasma TV. And given how distracting crosstalk is, this means that Panasonic retains its place at the top of our 3D TV chart.

Then, while the 50PX990's black level response is good versus the TV world at large, it also suffers a little in comparison with Panasonic's plasma TVs, plus a couple of the best direct LED models, come to that.

Finally, the 50PX990 seems to suffers with image retention issues, the like of which I haven't seen for a while. in other words, you can sometimes see 'echoes' of bright image elements lingering over the picture for some time after they should have disappeared. This was a once-common plasma failing, and usually disappears over time — but Samsung and Panasonic seem to have eliminated It almost entirely.

Net chatter between owners doesn't seem to make a big issue of the problem, but I can't see why buyers of the 50PX990 should put up with what can be a distracting problem for even an initial period. This is particularly the case since apart from this old-school technical issue, what we have here is in many ways a cutting-edge TV®



LG 50PX990

LG 50PX990 £1,600 Approx Highs: Beautifully built; relatively little

crosstalk with 3D Lows: Annoying image retention; black levels not class-leading; one pair of 3D glasses only

Performance: 12345
Design: 12345
Features: 02345

Overall: 12345



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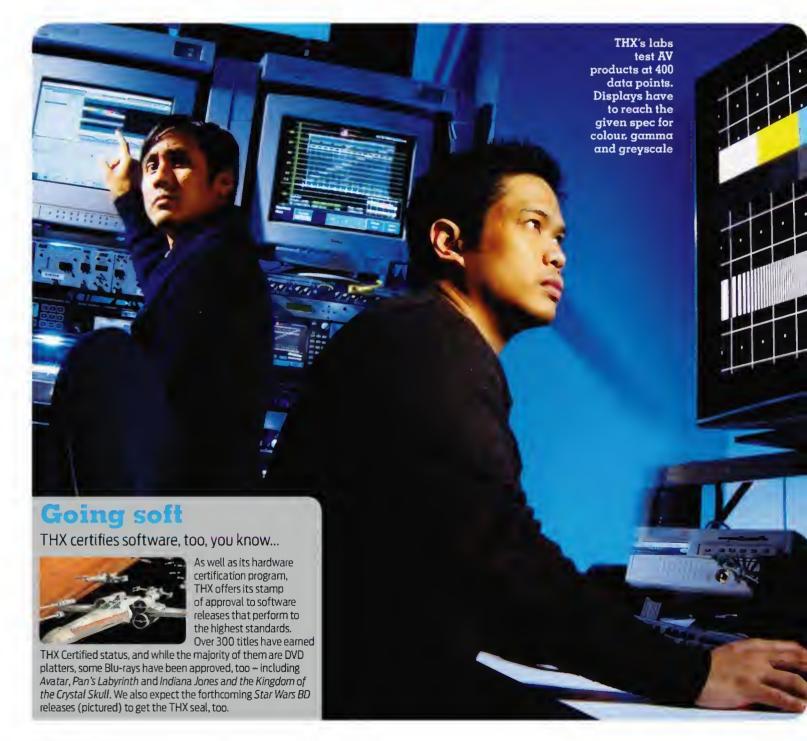


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Certifying the third dimension

Steve May chats with THX to find out why its 3D certification program is good news for film fans



HX has been certifying home cinema hardware since the heyday of LaserDisc.
Born out of a desire to safeguard the creative vision of moviemakers for the benefit of film fans, the organisation has applied science to simplify, safeguard and ultimately enhance the home theatre experience.

Occasionally its methodology has courted controversy. Over the years, it's provided a vital bridge between filmmakers and consumer electronics manufacturers.

For the rest of us, the THX marque on certified hardware means an entertainment experience designed to replicate the cinematic vision in the home. Depending on the type of kit you buy, this may range from consistent post processing and power levels in an AV receiver, to high quality playback and theatrical sound in source components and speakers. And now, the brand has turned its attention to perhaps the most contentious area of all: 3D.

To learn more about the THX approach to 3D, I sat down with Rick Dean, senior vice president at THX and Kevin Wines, image Technology Director.

So guys, which manufacturers are onboard with the THX 3D certification program so far?

Kevin Wines: 'We've made a little progress with 3D. We have LG and Sharp (for TVs) and JVC (for projectors). Panasonic are 'pending' as we call it. They're bringing some units in for testing soon. And of course there's a larger list of 2D-certified products, but many more are coming to market.'

So how does a TV or projector become THX certified? What exactly do you measure?

KW: 'Well, with 2D products we hit around 400 separate data points. We measure for picture performance as well as signal processing; we make sure displays hit within certain specifications for colour gamut, greyscale tracking and gamma. We make sure the white point is where it belongs and that there are no scaling artefacts. To help us do this we have custom-made test patterns, which tell us if a display has signal processing or scaling issues. Those are a lot of the core measurements. We also test for uniformity and off-axis viewing. For us, these are the standard tests.

'When we get to 3D we are actually doing a lot of those tests times two, because we are measuring through the glasses. We verify that the left eye and right eye match, because there are variances in manufacturing (this is for passive and active glasses by the way); and then we start looking at what is 3D specific. **Ghosting is the big bugaboo for a lot of people, so we also do some testing on eyeware response. We test that the left/right sync is correct.**

'it's all about making the user experience the best it can be. With 3D you start to worry about viewer fatigue, eyestrain and headache, so we do a series of tests which ensure the performance of the display minimises that, while maintaining correct colour gamut and greyscale.'

For many viewers, the 3D viewing experience is ultimately down to the glasses: how comfortable they are and how much light they filter away from the screen...

KW: 'Yes it's true, and in order to overcome the density of the glasses, in order to get some light output, manufacturers are really driving the colour and contrast



 and that's not a trivial task. it's not just about cranking the knobs. The brightness isn't really a linear function, we still have to make sure the TV is meeting all the specs. And

because display technologies behave differently, we have to set our specifications differently. We've learned the different behaviour of LCDs, plasmas etc, so writing the specs for them is different in both 2D and 3D.'

We've seen a lot of 3D TVs and very few offer the perfect viewing experience. Cynics might say that home 3D just isn't good enough at the moment, because of issues with brightness and crosstalk, so how can any TV pass THX certification?

KW: 'Well, bear in mind, those same cynics would say the same thing about digital cinema 3D. In fact, our projection specifications are exactly the same. If you go into a digital cinema, you'll measure 14fL (foot-lamberts) in 2D but only 4fL in 3D.

So is that relationship the same for home 3D?

KW: 'Absolutely, because the content is created within the same limitations. When I go into a timing theatre, the kind used by the likes of Jim Cameron, George Lucas and Michael Mann, I see exactly the same light levels. So our projection specs are identical. Our specifications for plasma and LCD (because they are inherently brighter technologies) differ, but when you start to look at those percentage differences, they're identical. They didn't make *Avatar 3D* on a 14fL screen, they made it on a 4fL screen. They made the look accordingly.'

Manufacturers of display hardware are supporting both Active Shutter and Passive Polarisation 3D technology. Given that the viewing experience between them is quite different, how does that affect the way you certify the displays?

Rick Dean: 'If the panel is able to take left/right sequential out of a Blu-ray player, that's what we start off with.'

What if the display is unable to support full HD 3D?

RD: 'Then we wouldn't certify the display.'

So, for sake of argument, you wouldn't certify an LG Passive 3D TV display?

RD: 'No, that still could happen.'

But surely a 1080p passive screen can't deliver full HD 3D?

KW: 'No, that statement is a misnomer. Manufacturers are all improving their methodologies in signal processing. Honestly, no one has submitted a passive display yet, so that issue hasn't actually come up. But we don't automatically certify. THX certification isn't based on how much money a manufacturer is willing to pay, and it isn't based on subjective testing only — although there is subjective testing in the process. Our specification is pretty thick and has a very serious layer of criteria.'

RD: 'Even with 3D TVs, THX certification starts off with how good it is performing in 2D. That's a big important thing for us. I know where you're going with the passive technology; for us, we use very specific patterns which are the most important elements that we know that test how the human eye and brain perceive sharpness. We have to make sure that a good quality image is always projected, 2D or 3D' •



Rick Dean: THX's senior VP says 3D certification won't be given to a display with no full HD 3D support



Kevin Wines:
THX
certification
isn't based on
how much
money a
manufacturer
will pay, says
the company's
Image
Technology
Director



KEF's new sub/sat array is done to a T

Kevin Gallucci usually prefers his speakers to be made from hollowedout tree trunks, but he's ready to make an exception for KEF's T-Series

EF's new T-Series range of home cinema speakers are definitely a sign of the times. They've been designed with a clear purpose in mind – to be an aesthetic match to newer, thinner, flatscreen TVs, enabling buyers to couple their hi-def movies with authentic 5.1 sound without their living room looking like a branch of Sevenoaks. The question is: has KEF sold out? Can these skinny speakers deliver the audio quality that everyone knows the brand is capable of?

Auditioned here is the T-205 system, which uses the larger T301 and T301c cabinets for the front left/centre/right soundstage, a pair of the smaller T101 for the surround channels, and is underpinned by the T-2 subwoofer. It retails for around £1,500. The step-up £1,700 T-305 system uses the bigger cabinets throughout; those who live inside a shoebox can go for the £1,200 T-105 array.

Whichever package you opt for, one thing remains the same - the thinness of the cabinet. Each speaker is an impressive 35mm in depth. They're sleekly styled, too, with a black cloth grille, black aluminium side trim and just a KEF logo to let you know that what you're looking at is actually a loudspeaker, if you were to see these in, say, Philippe Starck's apartment, you might confuse them with very minimalist objets d'art. Even the subwoofer is a stealth product, designed specifically to be slung in the corner of your room and out of your wife's sight. The look of the whole package might not be to everyone's taste, but i like it.

All the T-Series components are only available in black, although if

Samsung keeps selling shedloads of titanium effect TVs, you'd think KEF might make silver side trims available, too.

A unique feature about the T-Series speakers is that they are meant to be wall-mounted. Speakers usually sound best when they are positioned away from walls - when they are placed in close proximity they tend to get a bass boost, which can overshadow the midrange a bit. KEF has compensated for the influence of the wall in the speaker's design. However, not everyone will be wall-mounting these, so a special stand, called the Selecta-Mount, comes into play. Here, KEF re-adjusts the sound character of each speaker by introducing an extra filter section, before the speaker's crossover network, to switch the speaker into what the brand calls 'free-space balance'. This means the T-Series speakers can be wall or standmounted without adverse effects.

Tech-tacular

The T301s are a two-and-a-half-way design, with a single 1in aluminium tweeter sharing duties with a pair of KEF's new twin-layered midfrequency drivers. It's this latter piece of tech that has enabled the brand to get the T-Series' startling form factor. Itself only 27mm in depth (compared to the KEF's KHT3000 Uni-Q driver, which is a positively obese 70mm), the MF driver has been crafted with Fine Element Analysis (FEA) computer modelling. borrows a bit from KEF's super-highend Concept Blade prototype, and claims to deliver the same acoustic performance as a 'true' 4.5in mid-range. But does it?

AV/CV Product: 5.1-channel sub/sat system

sub/sat system designed to partner ultra-thin TVs

Positioning: Below the T305 array in the T-Series stable

Peers: Monitor Audio Apex; Paradigm MilleniaOne; Bowers & Wilkins FPM



To test the T205's mettle I first put on what has become everyone's reference BD disc for sound quality, *Avatar*, and skipped to the Viperwolves chapter.

This scene is a cinematic masterpiece for aural excellence and the slim, sexy KEFs handled it well. There was seamless integration between each speaker in the 5.1 setup, enveloping my listening position and drawing me into James Cameron's action. Sound was clear and detailed. When the 'dogs' are chasing Jake, they seemed dangerously close. Subtle effects in the cinema mix were deftly presented, too, adding an extra feeling of immersion into the movie. When speakers are able to do this, you know you are listening to something that is very good.

Switching to *Piranha 3D*, the KEF's tweeters showed their worth, and the high-frequency chatter of the killer fish teeth tearing through flesh was real enough to make me wince.

Going down a storm in the US

Mark Craven quizzes KEF's Brand Manager, **Johan Coorg**, about the T-Series speakers and gets some dancing tips in the process

t the Consumer Electronics Show, the world's high-end audio brands seek refuge from brash 3DTV and tablet launches within the luxury suites of the nearby Venetian hotel. Across two massive floors, surround sound and hi-fi freaks can wrap their ears around sonic treats – something impossible to do within the crowded hubbub of the convention centre.

it's here that KEF, and its effervescent brand development manager Johan Coorg, is demoing its new T-Series 5.1 array. I slunk in to get my first look and listen to the speakers and get the inside skinny on these slim cabinets: surely ultra-thin designer speakers are the focus of kooky, esoteric French brands, not the team that bought us the weapons-grade HCC award-winning Reference system?

Coorg naturally disagrees.
For him, the T Series is about crowd-pleasing design and high-quality audio. 'Our 3005 'Plus we'eggs' are arguably acoustic leaders in the sub/sat field,' he says. 'But we were getting concerned that everybody buys flat TVs and hangs them on the wall, and they're getting thinner and thinner and better and better quality. As good as the eggs are, and you can hang them on the wall, the 'significant other' won't like it. So the target function for our engineers was to make a speaker that the same pl the same pl we tweeter that Normally you at the back, any good in vent the tweeter that the back, any good in vent the back, any good

function for our engineers was to make a speaker that would be aesthetically pleasing for a flatscreen on the wall, but without compromise acoustically; to perform in terms of

SPL and Integration as good or better than our 3005 eggs.'

Achieving this has taken the brand some time, and gave KEF's engineers a few headaches ('They hated Steve,' Coorg jokes, referring to KEF's UK MD Steve Halsall), but the eye-catching 35mm cabinet depth was ultimately achieved with the design of a new driver.

Coorg holds it up for closer inspection. 'Everybody says "Hey, this is new technology and we've reinvented the loudspeaker," but in this case we really believe it's true.'

'This is the revolution. When you've got a normal bass driver, you've got magnet, a coil, a cone... even if you do it very neatly you end up with a driver which is at least 3.5in deep. What our engineers have done is to put all the commensurate parts (including powerful neodymium magnets, spider coil, etc), all in the same plane.'

'Plus we use a proper lin tweeter that is fully vented. Normally you vent out of a tube at the back, but that wouldn't be any good in terms of depth, so we vent the tweeter out of the sides.'

Coorg then proceeds to demo the T-Series (in its full-on T-305 guise). He doesn't do this with Avatar, or Saving Private Ryan, or

The Eagles' Hotel
California. instead
he spins up a CD
from Swiss
electronic whizzes
Yello. He then
starts dancing
around the room,
shouting 'Check
this bass! Walk
around the
room? Where's

the woofer?' He then ramps up the volume. 'Let's go nuts!'

Everyday people

in the suite, the T-Series front array are wall-mounted around a gloss black TV. The subwoofer lurks in the corner near a coffee table. The stand-mounted rear channel speakers flank a cream sofa. it's very much a standard living room setup — which is just what KEF wants. Even the rest of the setup has been chosen to match the £1,700 speaker system.

'Go along the corridor to other demos,' says Coorg, 'and you think "Oh that sounds nice, that sounds nice." But how much is the front end? \$70,000. This a \$2,000 system driven by a mid-range amp and a PlayStation 3. it's real world.'

More demos follow, during which i ask Coorg what he thinks the T-Series' rival products are. He looks at me like I'm an idiot — from KEF's point of view, there are no comparable speakers on the market, certainly not at this price.

I put it to him that what KEF has designed here could have further uses. You don't have to be a rocket scientist to realise that such a flat driver could easily resurface in, say, a designer iPod dock. if Arcam and B&W are doing it, why not KEF? Johan won't say, but I wouldn't be surprised to see it happen.

Back out in the Venetian hotel corridor, a bearded US hi-fi journalist is leaning against the wall, talking excitedly on his mobile phone. 'Come up to KEF. it's the best demo of the show,' he's saying. He may be talking about the T-Series, but he might just be talking about Coorg's dancing instead...



KEF's brand development manager Johan Coorg

Touch by Yello (left): Eclectic demo music



Below deck:
Adjusting the phase and bass boost levels on the T-2 sub will involve lifting it off the ground

The T205 system can play loud, too. For such a slim cabinet design, I was surprised by the SPL levels achieved. Better yet, it was able to go loud and maintain clarity. This suggests these speakers have inherently low distortion, but based on the amount of R&D that's gone into them I'm not surprised.

A lot of speakers can go loud, but thankfully the T-205 isn't ignorant when it comes to quieter material, either. in Avatar, after Neytiri saves Jake in the Viperwolves chapter, their awkward introduction to one another shows how dead silent the system can be — the only noise you hear is what was in the original mix.

Whether it's with the raucous delights of Avatar and Piranha 3D or more serene movie fare like the cop comedy The Other Guys, I found dialogue remained pinned down and clear. The centre channel's performance is commendable. Centres are the workhorse of any home cinema, and they have to be able to handle the most complex scenes with a high level of composure. The 301c can do this.

Let's play the music!

With the T-Series clearly crafted for living room installation, It's likely it'll get a lot of use with music, too. For this i spun up a selection from AiX Records' Audio Calibration Disc HD Music Sampler (not got it? You're missing out...); hi-res tracks that really put speakers through

Keeping α low profile: The T-Series cabinets are only

35mm deep – a perfect match for your flatscreen TV

their paces. The result was very natural-sounding, with a good amount of detail present. Some speakers can sound hyper-detailed, as if they're altering the original music signal and boosting the high frequencies, but here high notes were extended and clear. but not thrown in your face, so you won't get fatigued during a long listening session. However, the audiophile in me did feel it was missing something on these tracks. i wanted more transparency from the KEFs. Don't get me wrong, you can hear a lot of low-level detail, but i felt as if there was a bit of veiling of the music.

Also, these cabinets are better when given support up by the T-2 subwoofer. Should you ignore advice and listen to pure stereo you'll get a somewhat thin sound. Bring the 10in, 250W sub into play for a punchier, fuller performance. This little trouper can reproduce relatively low bass notes (down to a claimed 30Hz), but, more importantly, has a wonderfully tight, well-controlled and tuneful sound.

Overall, the T205 is a seriously enticing 5.1 system. Build quality is excellent, it dazzles with movie soundtracks, and will suit most people's music needs.

The icing on the cake is the slim, wall-mountable design – if you're looking for an affordable low-profile cinema system to complement your ultra-slim flatpanel, then look no further.

With its T-Series, KEF has identified a target market and grasped it with both hands.
Other brands will have to try hard to wrestle it away...

\rightarrow Specifications

T301/301c (Left/Right & Centre)

Drive Units: 2 x 4.5in dual-layer midrange; 1in aluminium tweeter Enclosure: Two and a half-way sealed Frequency Response: 80Hz-30kHz Sensitivity: 91dB (wall mount); 88dB (floor stand mount) Power handling: 150W Dimensions: 600(h) x 140(w) x 35(d)mm Weight: 1.5kg

T101 (surrounds)

Drive Units: 4.5In dual-layer mid-range; lin aluminium tweeter Enclosure: Two-way sealed Frequency Response: 80Hz-30kHz Sensitivity: 90dB (wall mount); 87dB (floor stand mount) Power handling: 100W Dimensions: 330(h) x 140(w) x 35(d)mm Weight: 1kg

T-2 (subwoofer)

Drive Unit: 10in Enciosure: Sealed Frequency Response: 30Hz-250Hz On board power: 250W Class D Dimensions: 380(h) x 370(w) x 177(d)mm Weight: 13kg Connections: Phono line level input



KEF T205 £1,500 Approx

Highs: Brilliant living-room-friendly design; immersive 5.1 performance; build quality

Lows: Stereo performance sounds a little thin

Performance: 02949
Design: 02949

Features: 03365

Overall: 12345

APRIL 2011 HOME CINEMA CHOICE

Mover and shaker

This pocket rocket offers a lot of picture for the price, says **Steve May**. But it should resolve to do better



The latest entrant in the increasingly crowded budget 1080p projector market. the ViewSonic Pro8200 has an impressive resumé. At a tidy 3.63kg, this diminutive 2,000 lumens light cannon bristles with connection options, sports TI's BrilliantColor picture technology and utilises a freshly minted 0.66in Digital Mirror Device for ultra-spiky detail.

The vented sides that drag air across the light engine may give the Pro8200 a little bit of a 'fan heater' aesthetic, but overall it's a rather nice looking and well-built projector.

Connectivity is generous. Crammed on to the back panel are two HDMi inputs, one component input, S-video and phono inputs. a pair of PC connections and a 12V trigger to integrate the projector with an electric screen. There is also a monitor output from the unit and a USB input, although the latter is for firmware updating and does not allow media playback.

For users who may wish to plonk the lightbox on a coffee table for occasional use, a trio of feet allow easy tabletop alignment, while auto/manual keystone correction (giving +/- 20 degrees of adjustment) is on hand to keep things on the straight and narrow.

Gamers' delight

ViewSonic says the model, which has a 16:9 native aspect ratio, is aimed at both movie fans and console gamers. Given that the projector throws out enough light to be used in a partially lit room, it's easy to imagine the Pro8200 as the centrepiece of a frag party, and i must admit that running Call Of Duty Black Ops through it was enormously engaging.

3D ready: No Not for £900! HD Ready: YES full HD, 1080p24 Component video: YES 1 set HDMi: YES 2 HDMi v1.3 inputs PC Input: Yes 2 x VGA 15-pin D-Sub PC Inputs Resolution: 1920 x 1080 Brightness (claimed): 2,500 lumens Contrast ratio (claimed): 4,000 lumens Dimensions: 335(w) x 110(h) x 265(d) mm Weight (w/o stand): 3.63kg Features: Single-chip 0.66in Digital Micromirror Device DLP; lamp life 3,000hrs/4,000hrs in Eco mode; remote handset; 0.9m–10m

throw distance, up to 300ins screen size; 1.5× manual optical zoom; internal speakers; 27dB fan

nolse in Eco mode

→ Specifications

When it comes to home theatre usage, it should be noted that this is not a particularly inconspicuous projector. The fan and spinning colour wheel throw out 31dB. You can curtail this noise by running the projector in its Dark Room (cinema) mode and/ or selecting the Eco setting. This drops operational noise down to 27dB. The latter also helps extend lamp life, typically to 6,000 hours.

With a fringe on top

Straight out of the box, it's apparent that the default black level setting of the Pro8200 is too light, it doesn't take long to work out why. Using a 20/20 step B&W scale, I tweaked the gamma to give a deeper, more contrasty image, which immediately brought that old DLP chestnut. rainbow effect, to the fore. Colour fringing remains an issue with single-chip DLP, despite advances in wheel technology. To confirm this i called on my chum Buster Keaton. His 1922 comedy The Frozen North is awash with the sort of contrasty black and white that provides perfect fringe-testing fodder.

if you are sensitive to DLP's colour rainbows, you can always run gamma low to minimise them (although blacks are rendered a mid-grey). Video processing comes via Pixelworks PW980 silicon, which offers 10-bit colour and motion adaptive de-interlacing. With no shortage of picture tweaks available, it's really not too difficult to get a good image. Colour fidelity is excellent and i found the reds were particularly convincing.

There are, unfortunately, serious problems with motion resolution and image panning. A horizontally scrolling monoscope pattern confirms that subjective resolution drops from around 1080 lines, when stationary, to a smudgy 600-700 lines when travelling.

Even worse, our Pro8200 sample performed a curious little jump/skip as the image panned. This hiccup proved constant and consistent. When I examined test patterns, the effect was all too obvious, although within general video hubbub it's less easy to spot, but it's still there.

Nice for the price

Overall i'd rate this as a nice enough budget 1080p projector, given the ticket price. However, despite its many plus points the package is undermined by poor motion resolution, and that panning 'skip' is definitely irritating •

→ Tech Labs

Power consumption: Watts





White screen: Power consumption is high compared to its peers

Test footage: Energy consumption was consistent regardless of the content being displayed

Contrast: ratio

Colour temp: Kelvin



5,315

Picture: The ViewSonic produces a very bright picture (up to 48.9fL) but with a low contrast ratio of 1610:1

Presets: Buyers of this budget PJ can get closest to 6.500K colour temp by selecting the Low preset. High: 10,326K Mid: 7,783K

Low: 5,315K User: 7,732K



HCC VERDICT

ViewSonic Pro8200, £900 approx

Highs: Excellent colour fidelity; good connectivity; bright enough for a partially lit room; modest footprint Lows: Limited motion resolution; noisy runner

Performance: 12305

Design: 02945 Features: 12345

Overall:



Fast mover takes it all in

Chris Jenkins warms to this plug'n'go storage

NAS (Network Attached Storage) drives are becoming the solution of choice for storing a wide range of digital media, including downloaded movies and TV, music, images and CD/DVD/Blu-ray rips. Speed, capacity and reliability are essential, and Buffalo's Linkstation Pro LS-VL has all three

This 'Multimedia Shared Network Storage BitTorrent Download Box', ships with a power supply, LAN cable and installation discs, and is available with built-in SATA hard drives in 1Tb. 1.5Tb and 2Tb sizes.

Windows and Mac OSX compatible, the unit is simply plugged into any network Ethernet port or into the back of your wireless router, and instantly accessed from any networked device in your house.

The device features maximum transfer speeds up to 76MBps courtesy of a 1.6GHz CPU. DNLA compatibility means it will talk to practically any other networked device (such as a Smart TV), and it has a web-based BitTorrent client feature, so it can download files while vour PC sleeps. Noise, while audible. is not distracting.

Highs

- Software provided includes WebAccess and an App for accessing from portable devices.
- Incorporates a USB port to attach devices such as printers and drives and for quick transfer of files from portable devices.
- NovaBACKUP, TurboPC and Time Machine software are provided for efficient file backup.

Lows

- Doesn't feature USB 3.0, which will increasingly become available on portable devices.
- Web-based management software can be a bit inscrutable at first.

Buffalo soldier: Large capacity storage in a



HCC VERDICT

Buffalo Linkstation Pro £170 Approx

Overall: 12345

SONY BDV-E870 → £330 Approx → www.sony.co.uk

Feature-rich and foolproof

Mark Craven auditions Sony's do-it-all home theatre system

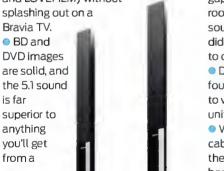
For those looking for a one-stop home cinema solution, affordable all-in-one systems such as this will always appeal. And the new breed do much more than just squirt out Blu-ray pictures (including 3D) and 5.1 sound - this black plastic ensemble will stream your music, video and pictures from a networked PC, suck tunes from your iPod, and give you access to catch up TV content and movies-on-demand. Unfortunately for Sony, so will many rival products, which is maybe why this system will also play Super Audio CDs...

Highs



XrossMediaBar interface, which should make navigating its extensive features a stress-free affair for most.

 Buyers get all the benefits of Bravia internet Video (including BBC iPlayer and LOVEFiLM) without



flatscreen TV or low-end soundbar.

 The speaker array struggles to deliver any real midrange. There's a gap between the deep-sounding and room-filling sub and the treblysounding surrounds. At least the diddly centre channel still manages to convey clean and clear dialogue.

Decidedly 'budget' build quality. i found the tower speakers were prone to wobbling and the central control unit emitted an irritating hum.

 While having colour-coded speaker cabling makes installation a breeze, the lack of HDMi inputs precludes hooking up additional components.



Sony BDV-E870 £320 Approx

Overall: 1 2 5 4 5



Magnificent seven

Adrian Justins rates this 3D capable, 7.1-channel all-in-one system

n paper the HT-C6930 is an impressive box of tricks, but is it over-specified? It boasts Blu-ray (including 3D), 7.1 speakers, internet video, multimedia playback and home networking amongst its numerous credentials. Of course, to use the 3D facility you need a 3DTV. And what do most 3D flatscreens (and certainly all of Samsung's) already have? internet video, multimedia playback and home networking...

Feature overkill or not, the system certainly has panache. The main unit is crafted from high-grade black, gloss plastic, sporting a backlit 3D logo and an illuminated disc tray.

With their sturdy cabinets and components, the speakers have a superior, almost dedicated audio brand-like quality to them. The front left and rights can be wall or standmounted, in tall-boy fashion, while the wireless kit lets you place the surround back speakers behind the listening position. The two other surround speakers, however, are hard-wired so any thoughts of a cable-free paradise are short lived.

Connections are light but effective, with built-in Wi-Fi and dual HDMi inputs, which is good news for routing kit such as a games console or digibox to a TV.

Aided by colour-coded speaker terminals and a granny-proof set-up wizard, installation is straightforward. Sound setup is easy, too: using the supplied microphone and a hideous orchestral cacophony emitted by the speakers, the system's auto calibrator detects cabinet distances and sets its levels and frequencies accordingly.

As a network media device the HT-C6930 works nicely, and the methodical instructions manual does an excellent job of taking the pain out of configuring a network.

As per the whole system, the interface is a pleasure to use.

The three Cs

This system serves up some fantastic images, especially with 2D sources such as Avatar on Blu-ray. The HT-C6930 is a master of the three Cs – clarity, colour and contrast. Detail levels are quite stunning; every fibre of Sully's T-shirt and bristle of his beard are clearly visible on a Samsung UE46C8000 3D screen.

With the HT-C6930 as the source, the screen of a same-brand 3D TV can automatically switch to its full HD 3D display mode. A message then prompts you to don the 3D goggles and switch them on.

This is certainly no slouch as a 3D deck, retaining clarity and brightness with the Monsters Vs Aliens movie. Crosstalk is an issue, but how much so depends largely on which screen you're using.

Sonically, this system delivers its most impressive surprise; the speakers mesh together exquisitely to deliver a finely controlled soundscape. Even at high volumes distortion remains a totally alien

concept as vocals, effects and musical score blend perfectly. in its sector, this is without doubt a class-leading product

AV/CV

Product: 7.1-channel 3D B u-ray home

Positioning: Below the premiumpriced HT-C9550W in Samsung's range

Peers: Sony BDV-E870; LG HX995TZ; Panasonic SC-BTT755

→ Specifications

3D playback: yes
Video upscaling: yes up to 1080p
Multiregion: No Region B BD/R2 DVD
HDMI: yes 2 x v1.4 in, 1 x v1.4 out
Component video: yes 1 x out
Analogue multichannel outputs: No
Digital audio in: yes 1 x optical
Dolby TrueHD/DTS-HD decoding: yes
Dolby TrueHD/DTS-HD bitstream: No
Profile 2.0: yes requires additional
storage for BD-Live
Total Amplification (claimed): 1,330W
Dimensions (main unit): 430(w) x 61(h) x

Weight (main unit): 3.8kg
Features: FM radio; built-in wireless/
Ethernet networking; Samsung
internet@TV online video portal;
support for DivX, XviD, AVI, MKV, WMV,
MP4, MPEGI, MPEG2, H.264, JPEG,
MP3, AAC, AC3, DTS, WMA, FAT files;
wireless dongle/receiver module for
surround back speakers; iPod dock
input; stereo audio phono in;
composite video out; FM antenna;
USB port; iPod dock; subwoofer
power 170W; 5 x DSP modes; Auto
Calibration system; 3D glasses not
supplied

HCC VERDICT

Samsung HT-C6930 £600 Approx

Highs: Top quality 2D Blu-ray deck; decent 3D pics; nicely balanced and detailed sonics Lows: Claims to, but doesn't eliminate speaker cables; some features may be redundant

> Performance: 02345 Design: 02345 Features: 02345

Overall: 12345







3D as the director intended

Sony brings the thrills of big-screen 3D home and **Steve May** is so impressed he can't get those spex on fast enough



any TV addicts are sceptical of domestic 3D. There's just not enough content available to compensate for the general inconvenience of having to wear special glasses, particularly if you like to multitask. Surfing on a laptop or snarfing custard creams are both devilishly difficult to achieve from behind Active Shutter lenses. But take 3D out of the living room and place it in a dedicated home cinema and it becomes a proposition that will make you rethink your views.

This projector is a direct descendant of the well regarded VPL-VW85 and looks very similar,

but Sony's engineers have ingeniously redesigned the lens assembly to incorporate a sync transmitter for the Active Shutter spectacles. It's been designed to bounce IR codes off a screen, and such scattergun distribution should serve a family-sized audience. The only restriction is that popcorn munchers cannot sit further than 5m from the screen.

If you're planning to install the device in a larger screening room, you'll probably need a supplemental 3D transmitter. The standard pack Sony sells for its upgradable 3D TVs will do the job. This standalone zapper connects via a length of RJ45 cable and should be placed at the front of the room facing the audience. It uses the same 3D eyewear as Sony Bravia TVs, although an additional filter for the lenses is required.

The VW90ES is larger than you might expect, but I'd rate it as a handsome piece of kit. Irritatingly, the connection board is mounted to the left rather than at the rear (a space reserved for air vents). For professional ceiling installations this could involve a mess of cabling.

However, the projector gets a thumbs up for its motorised lens protector, which effortlessly opens when the PJ is powered up and closes when switched off.

Key inputs include two HDMI, one PC VGA, component and phono AV, RJ45 and a 12V trigger. The latter is used to integrate the projector with a drop-down motorised screen, while some basic hands-on controls have been located above the port panel.

Helpfully, the iR remote is backlit and set-up controls are extensive; with zoom focus (a nicety missing from some of its competitors) and versatile electronic lens shift (25 per cent on the horizontal and 65 per cent vertical).

Silky shadow detail

Powered up, the Sony VW90ES is undeniably impressive. Fed full HD 2D fare, it's a lot brighter than its predecessor, offering silky shadow detail and seductive colours. Sony claims a dynamic contrast ratio of 150,000:1 using its Advanced Iris 3 technology, but during my session i was not particularly aware of this iris opening or closing.

In action, the VW90 remains acceptably quiet, particularly if you keep the lamp set to Low.

The SXRD panels can be driven to 240Hz, and this kind of refresh rate



goes a long way to mitigating against image blur. The brand's proprietary Motionflow has a couple of options to play with: one creates 'intermediate' frames to smooth pans and remove cinematic judder, while another inserts a black frame to improve motion clarity. Also known as a dual black insertion technique, this Dark Frame trick makes images far crisper.

The VW90ES offers an invitingly sharp static image and can maintain motion resolution pretty much up to 1080 lines.

The key to keeping clarity is the Film Mode. When engaged, there's a drop in brightness, but a big jump in general detail. To maintain smoothness, Sony has added a Motion Enhancement tweak (with Low and High settings). I found the best combination to be Film Mode 1 with Motion Enhancement set at Low. Using this setting, the amount of detail extracted from Iron Man's armour during the final reel team-up with War Machine (Iron Man 2 on Blu-ray) is just phenomenal. The flaking paint is all on the screen, to the point where, even in 2D, the image looks almost 3-dimensional.



58 REVIEWS



With these settings locked in, the projector also aced my motion resolution tests. A scrolling resolution chart devised by the Advanced PDP laboratories kept a full 1080 lines on the plate when scrolling at 6.5ppf. Dropping luminance from 100 per cent to 50, and then 30, made scant difference to clarity.

Although Sony doesn't subscribe to iSF calibration, it does offer considerable creative control. There are three cinema modes. plus Dynamic, Standard and User settings, and control over a bunch of gamma and colour parameters. The company's Real Color Processing mode allows very precise fine-tuning of skin tones and specific hues.

The projector's 3D performance is equally knee-trembling. The keys to the VW90ES' 3D success can be found in the dedicated settings menu. From here you can alter both the brightness of the 3D glasses and the zone of focus within the stereoscopic image. Both are very powerful tools.

For optimum 3D, the first thing you should do is minimise the brightness of the spex. By making the glasses darker, you effectively shorten the colour decay time between the left and right eye. This in turn reduces crosstalk. You'll take a hit in overall brightness (indeed the 3D experience looks a lot more like that from Panasonic's VT20 plasmas), but in a darkened cinema room environment the gain far outweighs the pain.

One area where you might be tempted to increase the brightness of the glasses, though, is games. The Zombie option on COD Black Ops (Xbox 360) was just too gloomy to play with the glasses on Low. Sometimes you have to endure a little crosstalk if you want to survive a zombie attack.

The power of parallax

The other wizard feature is the 3D Depth Adjustment tool, which enables you to dial crosstalk off the

Edge sideways: Connection ports are located down the left hand side rather than at the rear

screen. This doesn't work across the entire image, but it will eliminate double imaging at various depths. Effectively, you can remove ghosting from objects in negative parallax, zero parallax or positive parallax. Tighten background images and objects in negative parallax and credits, big closeups and effects that stick out begin to separate. Snap negative parallax into absolute focus and positive parallax images begin to drift. I never managed to eliminate all crosstalk, but I did reduce it to a benign level. Once done, the VW90ES rewarded me with probably the best 3D

experience I've yet had in the home.

Suddenly, all the tricks of 3D cinematic composition began to explode from the screen. When the black limo cruises up to the church at the beginning of Monsters Vs Aliens, the bumper threatens to park itself in your lap. This small detail is lost when viewed on a small 3D TV. Similarly, the opening tethered bat and ball sequence that makes you smile on a small screen, causes an involuntary flinch when projected at room size.

And when Jake Scully is pulled from his cryo chamber at the start of Avatar (3D Blu-ray), the astounding depth of the spaceship is enough to cause a sharp intake of breath.

For those who are bothered about the lack of available 3D content, the VW90ES also has onboard 2D-to-3D processing. This uses the same chippery as the brand's 3D Bravias and can introduce planar dimensions into any flat source. This is an unpredictable process at best, but gamers may gain some use from it.

Overall, the VPL-VW90ES should be considered a marvellous projector. it's beautifully built and delivers both corking 2D and genuinely involving three-dimensional imagery. in fact, so much so that, having lived with it for a while, i find it difficult to imagine ever being satisfied with regular 3D TV again •

→ Tech Labs

Power consumption: Watts





White screen: Normal energy consumption for this type of projector

Test footage: Energy consumption was constant regardless of test material

Contrast: ratio

Claimed 150.000:1 Actual 54.103:1



Picture: A superb real-world contrast ratio from this Sony 'ES' branded projector. We measured a dynamic contrast of 55.628:1

Presets: Colour reproduction and accuracy was very good from the .ow 2 preset. High: 10.036K Middle: 8,482K Low 1: 6,868K Low 2: 6.342K



HCC VERDICT

Sony VPL-VW90ES £5,400 approx

Highs: Terrific 2D performance; low operational noise; extensive user control; deep immersive 3D Lows: No THX preset; can't quite get rid of all crosstalk

> Performance: 02335 Design: 02849 Features: 02335

Overall:



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Quality tweet

Alvin Gold auditions another horn-based, 5.1 compact speaker system and thinks it's money well spent for cash-strapped owners of flatscreen TVs

he popularity of this type of compact speaker package has mostly been driven by the switch from CRTs to flatscreen TVs.

For, while the case for flatscreen TVs is overwhelming on most counts, sound quality has suffered because even large flatpanels don't lend themselves to good acoustic design.

Subs in particular don't like being crammed into shallow enclosures, while satellite speaker design also suffers. The left and right speakers are too close to each other, and to the centre speaker, to give a wide spread of sound. They are also hobbled by the single structure that surrounds them all, which

acts as a sounding board, delivering a characteristically wishy-washy sound, with poor bass dynamics. This is where specialist producers such as Klipsch enter the fray.

This system is only available as a 5.1 package. You can't buy additional satellites if you want to build a 7.1 channel system, although I doubt that'll make a difference to most purchasers.

The satellite speakers are fundamentally conventional in design, though there is real evidence of attention to detail. All five sats are

based on sealed enclosures, made from robust heavy duty ABS mouldings, smoothly rounded at the sides and back, the shape helping increase stiffness. Centre speaker aside, the otherwise identical satellites are home to a single small bass/mid driver, plus a horn-loaded tweeter that generates a lot of grunt from very little input power. However, Klipsch doesn't specify the sensitivity of the speakers (the quoted figure only refers to maximum output level). In any case the tweeter diameter is very small,



which helps with upper frequency response, all other things being equal, and there are small diffusers in front of the treble domes, probably to counter the tendency of horns to be excessively directional.

The bass/midrange unit is tiny, but seemingly well made. The apparent source of sound from the tweeter and the bass/mid unit is coplanar. which should translate into more consistent imagery.

The centre speaker, which adjustable wall-mounting hardware.

AV/CV

Product:

Position:

Peers:

Finally, the subwoofer is a perfectly conventional active design, based on a small diameter bass unit, and a rather lightweight enclosure, which you can feel thrumming away through your fingertips. Adjustments are available for frequency coverage (low pass filter) level and phase

includes two bass drive units for increased power handling, is essentially a slightly larger version of the main satellite turned on its long side, which can be adjusted in its supplied cradle to optimise it for use above or below the TV. The other satellites also come with simple

Throbbing gristle

There are no design surprises with this system, but attention has been lavished on build quality

reversal which provide the standard set of sound tweaking options.

On the whole it works well with some minor caveats. Sound quality is bold and outgoing for home cinema material, although i wouldn't trust it with an audiophile music collection, and the subwoofer is an excellent match to the rest of the system and is arguably its high point, it has real muscle and moderately impressive depth and weight, if you take care to optimise the control settings and use some restraint. This one has the tautness and discipline necessary to make a good, seamless extension to the coverage of the satellites and so it matches the system well.

The satellites perform solidly near the crossover region to the sub, and this helps produce an impressively seamless join. Don't expect true high-octane results, especially with soundtracks rich in dramatic effects, but it works commendably with more mainstream, and (dare i say) naturalistic material.

Higher up the frequency band, the system begins to show some signs of weaknesses. Klipsch is not demanding of amp power with its horn tweeters, and there is no shortage of treble output if you're sitting close to the main tweeter axis, but there is a trace of hardness and aggression here, too.

The Klipsch system has some excellent positive qualities, such as its consistent and even transitions across the sound stage and from front to back. The additional bass driver gives the centre channel more clout, too. The system also offers first-rate vocal intelligibility, which should come as a real relief to many users of flatscreen tellies.

For reasons best known to Klipsch, this package is described as HD Theater, transparently cashing in on the current preference for HD video. But don't be fooled; there is nothing remotely high-def about this system, unless you count the sometimes overcooked treble that helps emphasise fine detail (but not always in a good way).

But the Klipsch HD Theater 500 has plenty going for it. The speakers are relatively small, discreet and well built (the cheapskate use of spring terminals aside), and the system is also intelligible, detailed and open-sounding, if you're looking to build an affordable surround sound setup with more quality than an all-in-one system, then partner this with an entry-level AVR and enjoy .

→ Specifications

HD Satellite speakers

Drive Unit: 1 x 2.5in bass/midrange; 0.75in horn-loaded tweeter Enclosure: Two-way ABS-moulded sealed enclosure Frequency Response: 150Hz-20kHz Sensitivity: N/A Power Handling: 100W Dimensions: $150(h) \times 61(w) \times 98(d)$ mm Connections: 2 x spring terminals

HD Centre speakers

Drive Unit: 2 x 2.5in bass/midrange, 0.75in horn-loaded tweeter. Enclosure: Two-way ABS-moulded s ealed enclosure Frequency Response: 150Hz-20kHz Sensitivity: N/A Power Handling: 100W Dimensions: 91(h) x 228(w) x 98(d)mm Connections: 2 x spring terminals

Sub 8 subwoofer

Driver: 200mm fibre, composite cone driver Enclosure: Vented, bass reflex vinylwrapped MDF Frequency Response: 36Hz-200Hz (variable via low pass filter) On board power: 100W continuous Dimensions: 356(h) x 267(w) x394(d) mm Connections: 2 x phono (line level); spring terminals (speaker level)



HCC VERDICT

Klipsch HD Theater 500 £500 Approx

Highs: Good detail and projection; solid, well extended bass Lows: Slightly rough and edgy horn tweeters don't deliver high-quality audio reproduction

Performance: 102846 Design: 02945 Features: 12335 Overall:

3D helps raise the bar

John Archer finds much to like about Panasonic's flagship soundbar



AV/CV

Product:

3D Blu-ray player/iPod dock m a wall-mountable 'sound bar' format

Positioning:

only speaker bar-style 3D Blu-ray playe

Peers: LGs HLB54 Samsung ince the advent of flat TVs, manufacturers have been coming up with audio solutions that fit the new 'hang on the wall' ethos. But few, if any, have done so as comprehensively as this system.

The centrepiece is essentially a long black bar, into which Panasonic has crammed two stereo speakers, a Blu-ray player capable of playing back the latest 3D discs, an FM tuner and even an iPod/iPhone dock. Also included is a chunky but nicely finished subwoofer you'll need to stow away. Happily, this connects via Wi-Fi to the main system.

The bar can also join your home's Wi-Fi network to access both BD-Live functions and Panasonic's online portal.

The design of the 'bar is extremely cool, especially the way a central 'door' slides right to reveal the iPod dock and left to reveal the BD tray. it only protrudes 88mm around the back, meaning it could be wall-mounted beneath your TV without looking too cumbersome.

Setup couldn't be easier: connected wirelessly to the main unit and without any input from us, its HDMi output immediately shook hands with our test screens and the subwoofer.

The potential of the BFT800EBK as a full media centre is enhanced by its ability to play video, photo and music files from USB devices and SD cards. The format compatibility spread isn't totally comprehensive, but the DivX Plus HD, MP3, JPEG,

AVCHD and MPEG2 options arguably cover the most common bases.

You'll also need to use the SD card slot to add memory to the unit, as it doesn't ship with onboard memory for BD-Live features.

Disappointingly, you only get a single optical digital audio input, so people wanting to attach, say, a Sky HD receiver and games console will have to switch cables.

Keeping it simple

Considering its lack of a sophisticated speaker setup, the BFT800EBK sounds pretty good. There's plenty of detailing in the mix without sounding dislocated or harsh or missing anything from the audio spectrum, while volume levels can be pushed high without distortion setting in. Most surprisingly, the subwoofer integrates naturally with the main speaker bar.

I didn't experience any convincing surround sound from the system, even when using its Virtual Surround options, so it's a shame you can't add rear speakers, even if you wanted to. Also, dialogue can be overwhelmed in dense sound mixes such as those in Avatar.

But with iPod music playback sounding as well-rounded and MP3s are ever going to, and the picture quality from the Blu-ray deck almost matching Panasonic's standalone 3D players, the system offers a convenient route to much improved home entertainment – particularly the wireless subwoofer hookup

→ Specifications

Video upscaling: ves Multiregion: No Region B Blu-ray, R2 DVD HDMi: yes one output Component: NO Multichannel phono audio input: NO Digital Audio: YES one optical input SACD/DVD-A: No/NO Dolby TrueHD/DTS-HD: YES/YES Profile 2.0: YES but needs optional extra memory Dimensions (system unit): 1035(w) x $188(h) \times 88(d)$ mm Also featuring: FM tuner; DLNA via Ethernet or wi-fi (with optional dongle); video, photo and music playback (DivX HD, AVC HD, MPEG2, JPEG, MP3) from USB and SD cards; DLNA PC streaming; iPod dock with control; 2 x 90W of power plus 120W to the subwoofer; VieraCast online



services including AceTrax; YouTube; Eurosport; BD-Live; CD and DVD

playback via BD deck

Panasonic BFT800EBK £650 Approx

Highs: Superbly compact and wellorganised design; excellent picture playback; Wi-Fi connection Lows: No real surround sound effect; no BD-Live memory included; dialogue can get drowned

Performance: 12345
Design: 12345
Features: 12345

Overall: 12345

Upscaler fills the gap

Martin Pipe tries out the HD set-top box that dares to be different



AV/CV

Product:

Entry-level Freeview HD box with pay-TV support

Positioning:

Corrently, the only i-CAN product

Peers:

Technisat HDFV; Humax HD-FOX T2 Jou may want to purchase an i-CAN if you are one of those people who bought your HDTV just before manufacturers started building in Freeview HD tuners. Or you might be in the market for decent sports coverage without an unsightly dish, or because you lack cable connections in your area — the i-CAN is the only current Freeview box with the necessary front-mounted card-reader for subscription services like Sky Sports and ESPN.

If you don't yet have an HD Ready TV, a Scart socket will tide you over until that new set arrives. It will also facilitate recording of channels via a VCR or DVD recorder. And that's just as well, as the i-CAN is sadly more of an I-CAN'T when it comes to more advanced recording possibilities. Other entry-level Freeview HD boxes, such as the well-received models from Technisat and Humax, can be turned into basic PVRs through the simple expedient of plugging in a USB storage device. Alas not the i-CAN — at least, not at present.

One of the unique benefits of this slimline box though is its funky, carousel-based Carbo user interface, which covers all aspects of the receiver from installation and internet-delivered firmware updates, to general use.

The EPG, which delivers 8-day schedules at the touch of a button, looks good and is reasonably responsive in operation. Also very readable is the onscreen 'channel

banner' information popup. The unit is compatible with all of the other usual services; digital teletext is supported, as are audio-described soundtracks and subtitles.

Channel locks could prevent
Junior from peeping at those rather
sad chat-line services. Also on
offer are user-definable, favourite
channels lists. These are accessed
via a dedicated button on the
handset, which can be programmed
to operate various brands of TV.

After a bit of a wait, the BBC's iPlayer works well, but what a pity that its commercial competitors aren't also available. Manufacturer, ADB, hasn't built in a network/USB multimedia player, either, although products it supplies to other markets apparently do. Both the Technisat and Humax boxes offer this feature.

Redeeming features

However, the AV performance from this device is first-rate. Freeview HD channels are presented with plenty of visual snap and vibrancy, and you'll seldom see standard Freeview channels looking better, either.

Subjectively, I would say that the i-CAN gives results on a par with the integrated digital tuners of many TVs i've seen. It thus follows that the upscaling employed here is of a high standard. iPlayer video is also crisp, although even in the highest quality setting it's quite clear that what we have here is standard def.

So, while it's light on features, the i-CAN is still worth considering

→ Specifications

Tuner: YES Freeview HD
Scart: YES 1 (RGB)
Component video out: NO
USB: YES rear, but currently for firmware
upgrades only
HDMI output: YES standard-def channels
upscaled to 720p/1080i/1080p
Stereo phono output: NO
Digital audio output: YES optical
Ethernet: YES currently for iPlayer and
firmware upgrades
CI slot: NO but Nagravision CAM and
card reader built in for pay-TV
Dimensions: 230(w) x 36(h)
x 167(d)mm

Also features: Lip sync adjustment; iPlayer (three quality settings); favourite channels list; ; onscreen help; 8-day EPG; digital teletext; subtitles/audio descriptions



i-CAN EasyHD 2851T £130 Approx

Highs: Superb results from SD and HD Freeview channels; ready for pay-TV Lows: iPlayer support not HD; no multimedia playback or USB recording

Overall:

Performance: 12343 Design: 12343 Features: 12363

APRIL 2011 HOME CINEMA CHOICE

64 TUTONDO OKE 5.1 → £3,500 → http://soundthinking-distribution.co.uk



Carry Oke around the living room

Jim Hill meets a 5.1 array that couples Italian design with acoustic science

utondo sells all manner of hi-fi and communications products on the continent, but here in the UK, the brand is still something of a mystery. The curiously-shaped and surprisingly named Oh satellites merely add to the intrigue, and since they're going on sale here this year courtesy of Sound Thinking, we've rounded up the spherical speakers with their floating tweeters to see what all the fuss is about.

Oke is part of the Oh family and it's the newest arrival from italy. What its engineers have realised is that their brand of spherical speakers aren't just easy on the eye, but also perfectly shaped to deliver direct and uncoloured sound. With no parallel walls inside the enclosure, there's no buildup of unwanted standing waves that can affect the sound. This also means that the external cabinet has no impact on the projected sound waves, either.

Having a ball

This is why we've seen so many different kinds of globular speaker

lately. Most use a single drive unit in a small satellite design, but these Tutondos are a two-way design with the tweeter seemingly floating directly in front of the mid/bass driver. This feat of engineering is accomplished simply by mounting the tweeter assembly on a metal arm attached to the solid aluminium cabinet, thereby aiming for perfect integration of the high and mid-range frequencies.

The Oke system is made up of five identical satellite speakers, two of which are mounted on tall metal stands, while the other three are held in table stands. It's a pity the subwoofer isn't round too, but then given the non-directional nature of the very low frequencies, you can push this box behind the sofa.

It's a particularly elegant speaker solution that's sure to impress houseguests from the off, but they're not just works of art. Each sphere is made up of two pieces of metal alloy and they're reassuringly heavy and rigid as a result, while having very low cabinet resonance.

The lin tweeter, with its neodymium magnet, is housed in a much smaller metal sphere of its own and suspended by the same piece of aluminium that forms the solid metal baffle. Two narrow vents above and below the larger driver unit form the front air ports.

Stiff fabric grilles (available in a eye-catching variety of eye-catching colours, plus more sedate black and white finishes) can be attached to complete the perfect sphere, and the band that wraps around the sphere just behind the grille can be swapped for optional coloured hoops, too.

The speakers are mounted on the simplest of stands, in keeping with the brand's ethos of minimalist design.

Meanwhile, the subwoofer is clearly the odd man out, but, of course, it has a very different job. it uses an internal 10in woofer to provide the low frequencies, and it's completely enclosed inside an MDF cabinet with a matching silver finish. It stands on a shallow circular



66 REVIEWS



Mongrel in the pack: At least the less stylish sub can be stashed out of sight behind your sofa

pedestal and ports air and sound through the gaping funnel at the front. It's not pretty, but it uses its 200W amplifier to generate more than enough bass to supplement the more dainty satellites.

As a team, the Oke sub satellite arrangement presents a deliciously detailed soundstage. The satellite speakers clearly have very expressive and dynamic tweeters, while the sub reaches low and integrates well with the rest of the pack.

Using a hefty Denon AVR-4810 receiver, this system really springs to life, but even after downsizing halfway through the audition to a lower-powered Yamaha RX-V1067 receiver, these spheres proved easy to drive. In fact, any moderately powerful amplifier should work well.

They aren't particularly fussy when it comes to placement, either. The drive units are small, which usually means the sound is very directional, but these have slightly wider dispersion characteristics. And with the ports facing forwards, they don't mind being pushed back against the wall. in fact, with the table stands screwed to the back wall, they become even more rigid, while the wall itself helps project the sound forwards. The flexibility of the stands also makes them easy to install and, no doubt, highly desirable for architects to work with.

The fifth element

What the Oke system doesn't have is a specialised centre speaker, so a fifth satellite carries the dialogue channel and this needs to be in line

with the front pair to achieve a cohesive front soundstage. While it can't manage the deep resonance of large wooden cabinets, the three speakers do deliver a very clear and revealing sound that means you won't miss any mumbled lines.

Toy Story 3 on Blu-ray has one of the best soundtracks we've heard, and is useful for showing off the full potential of this revealing system. It's actually a 7.1 mix, but it sounds beautifully rich and detailed on this 5.1 setup. Pixar's films all display an impressive attention to detail, whither visual or on the soundtrack, and these sensitive satellites miss none of it. From the crunching footsteps of the

From the crunching footsteps of the toys as they venture out onto tarmac, to the riotous Rough Play scene in Chapter 10, these speakers convey every nuance.

The lively musical score sounds cinematic, too. It fills the room beautifully, even though this isn't what you would call a warm tone. There's plenty of bass and good extension from the sub, but if you turn it up to add bass warmth, it can sound disjointed and the little satellites can thump out of kilter. In my view, there's a well-balanced and neutral tone, but don't expect the wrap-around bass that specialised home cinema packages can offer.

Instead of THX-style boom and tizz, this system seems to be tuned as much for music as movies. It doesn't quite have the separation, or soaring midband, of full-range hi-fi speakers, but it does sound fabulous with multichannel music recordings, especially SACD and DVD-Audio, where the extended dynamic range really stretches the excellent tweeters.

Of course, the retail price puts this system In a league where it is possible to get more bang for your buck. This isn't a particularly loud speaker package, and it's not designed for a very large dedicated home cinema room. It can, however, fill a medium-sized room with ease.

So, this stylish system is a well balanced, beautifully designed 5.1 solution that demands to be on show in the living room. It's easy to accommodate and plays music just as competently as it handles complex film soundtracks. You might miss the ferocity of a wood-cabinet floostanding array, but then not everyone has room for one of those. Get an audition if you think you're stylish enough... •

→ Specifications

OKE satellites

Drive Units: 1in ferrofuild cooled tweeter; 4.5in mid/bass driver Enclosure: Front ported bass reflex Frequency Response: 75Hz-20kHz Sensitivity: N/A Power handling: 80W Dimensions: 33(w) x 112(h) x 33(d)mm Weight: 1.8kg

Oh subwoofer

Drive Unit: 10in woofer Enclosure: Front-ported enclosure Frequency Response: 35Hz-180Hz On board power: 200W Dimensions: 36(w) x 42(h) x 38(d)mm Weight: 21kg



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Lit up by laser

Lasers are an economical backlight alternative to the old-school halogen bulb. **Martin Pipe** assesses this slimline wonder

asio's XJ-A235 is not a dedicated home cinema projector; it only has 720p (1,280 x 800) resolution, a single HDMI port and lacks professional calibration options, while employing only single-chip DLP technology. Yet this lightbox might pique the interest of shoppers also looking at £1,000 models from the likes of Vivitek and Optoma, because of its cutting-edge lighting under the bonnet.

The backlight behind the 0.65in DLP chip takes the form of a blue laser. There's also a separate red LED light source, plus a filter that's used with the blue laser and some careful timing to reproduce the green element of the picture. LEDs and lasers respond to switching much faster than halogen bulbs and so there's no need for that annoyingly noisy colour wheel. Another advantage of Casio's 'hybrid'

approach is that a 20,000 hour life can be claimed for the lighting, versus the 3-4,000 hours quoted for the average projector lamp. And Casio's backlighting does have the benefit of running cooler, which should improve reliability. There is a small fan, but although it's quieter than usual in the brightness-reducing 'eco' modes, it screams very loudly indeed when they're not used.

The XJ-A235 does deliver a bright picture – our Tech Labs measured it at 18.8fL, although the 1800:1 contrast ratio isn't too exciting. And if you're used to the comprehensive socketry of large purpose-designed home cinema PJs, be prepared for a shock. The lack of rear-panel space dashes any hopes of flexible connections.

Alongside the HDMI port, you get a 15-pin D-Sub terminal for the analogue VGA outputs of PCs and a 3.5mm socket that will accept stereo

audio and composite video with a supplied cable (no component, hi-def or otherwise).

As with a lot of small form projectors, a speaker is built in. It's mono, and tiny, and sounds like an ant trying to clear its throat.

The XJ-A235 is quick to start and reasonably easy to install. It can be ceiling or desktop-mounted and caters for front and rear-projection. The 2x zoom and focusing can be controlled via the compact handset or a top-mounted collection of buttons. There's an auto-keystone (electronic, rather than optical) feature, too. To align the picture with the screen when the unit is desktop-mounted, one of the feet is screw-adjustable, while the front foot can be raised or lowered, albeit rather coarsely. Menus cover the essential picture tweaks, but nothing more. Annoyingly, they fill a significant portion of the screen and are not

AV/CV

Product:

Lightweight
720p projector
with innovative

Positioning:

Lasio's top 2,000-Lumen WXGA model

Peers

Vivitek H108: Optoma HD2 (both fuli HD DLP)

Cool runner:

Laser
backlighting
means the
Casio is energy
efficient



REVIEWS 69

→ Tech Labs

Power consumption: Watts





White screen: Uses a below average amount of energy compared to rivals. With Eco-mode turned up, it draws only 120W Test footage: We measured no change in energy consumption while watching live footage

Contrast: ratio





Colour temp: Kelvin

Picture: Our contrast reading was well below the manufacturer's spec. Our brightness measurement of 18.8fL, commendable, however, particularly given the compact size of this unit

Presets: The Warm preset gives the closest measurement to 6,500K, but we found colour temp fluctuated considerably Warm: 7436K Normal: 7900K Cold: 8733K



Disappointing backside:

The petite rear panel doesn't accommodate many inputs translucent. As a result, it's difficult to see the effects of any adjustment.

LCD throwback

Even in the lowest power 'eco 2' mode, the picture brightness is ample for a darkened room. However, the very dark greys that pass for blacks are redolent of those LCD projectors of yesteryear. Flesh tones are not particularly natural, either, their presentation tending towards the pallid. Reproduction of deep blue also fares disappointingly, and so it would appear that Casio's

innovative light source is affecting the colour gamut.

Even by the standards of a 720p projector resolution is lacklustre. The result is that the finer details of pristine Blu-ray transfers are masked somewhat. Take, for example, the starry exterior shots of Moon. No longer is the spacescape comprised of pinpricks of distant light against an inky blackness. Instead, all but the most prominent blur into uniformity. To give another example, i thought the Boston skylines on the Edge of Darkness Blu-ray were rendered with little better than DVD clarity.

DLP's rainbow effect can be quite intrusive, too, especially with black and white material. Yet some vestiges of cinematic presentation are retained. This may be a small machine, but it's capable of visuals on an impressive scale provided your room is big enough; the three-step light source enables you to adequately balance brightness, fan noise and power economy. The picture processing may be unspecified, but motion is conveyed in a very filmic way. Auto-iris 'pumping' is mercifully absent, too.

For the boardroom or classroom, where a projector may be in constant use, Casio's XJ-A235 might fit the bill on account of its low running costs. Fed from a PC, the lacklustre picture fidelity won't be that troublesome. But even for just plug-and-play gaming and home cinema applications, the XJ-A235 just doesn't cut the mustard •





Casio XJ-A235 £1,000 approx

Highs: Bright pictures; 20,000-hour lamp life Lows: Disappointing picture quality; noisy fan in high brightness modes; lack of home cinema connections

Performance: 12333 Design: 12333 Features: 12335 Overall: 12345

Finishing touches

Adrian Justins trawls the shelves for those must-have home cinema extras

Q2 INTERNET.

Approx £90

Setting up this wi-fi powered internet radio does require traditional use of a PC or Mac so that it can receive up to four radio stations or podcasts. but (the 'on' button aside) all subsequent operations can be done just by altering the position of the unit. Volume is increased by tilting the cube forwards and decreased by tilting it backwards. To change stations, the box is rotated onto another of its four sides. Tilting on to its front switches it off. Available in white, black, lime, pink and blue, the Q2 is supplied with a mains adaptor/charger and USB connection cable.

HCC VERDICT Great fun and excellent sound quality



TEUFELREARSTATION 4

Approx £270

No one-trick pony this, the RearStation 4 is designed for wirelessly connecting rear home cinema speakers, but can also be used for delivering multiroom stereo listening. Its principal purpose is for converting a speaker setup from wired to wireless, which is achieved by connecting stereo phono outputs from an AV amp to its transmitter. The receiver contains an integrated 80W two-channel amplifier, so an external amp isn't required to drive the speakers. When coupled with a stereo speaker set, the two units effectively become a fully active speaker package. ideal for

removing the speaker wire that trails across your living room floor to your surrounds. www.teufelaudio.co.uk.

HCC VERDICT
A tad expensive but maybe
a small price to pay for
domestic harmony







LG ST600 SMART TV UPGRADER

Approx £120

As Apple TV has already shown, you don't need a cutting-edge screen with built-in internet TV to get connected to the world of on-demand content. But LG's Smart TV Upgrader box is set to arrive just as web TV is about to get serious. Offering the same functions as LG's 2011 range of TVs, the ST600 is a gateway to myriad entertainment options including movies on demand (eg iPlayer and Acetrax), social networking sites, information utilities, an app store and a fully functioning web browser.

Announced at CES where the US price suggested it should retail in the UK for around £120 when it goes on sale this spring, the box is compatible with any HDMI-equipped brand of TV and boasts wireless streaming from DLNA computers, it comes with a small 'point and click' remote control, but web navigation can be speeded up by using an iPhone or Android device with alphanumeric keys. It's possible to connect a mouse using a USB input, which can also be used to boost the built-in 1GB flash memory.

www.lg.com/uk
HCC VERDICT
Give your TV a brain boost

IXTREAMER HYBRID HD MEDIA PLAYER

Approx £159

This is an HD Media Player and Streamer with iPod/iPad/iPhone Dock. The unit's 1080p network media player enables you to stream your content from a PC, from the internet or from the iXtreamer's built-in hard drive, which supports up to 3TB of storage (supply your own 3.5in hard disk). Supports all the major video formats.

www.advancedmp3players.

HCC VERDICT
Can iXtreamer raise the standard of iPod dock
performance? Look out for a full test soon





OMNIMOUNT VERONA

Approx from £280

Even those of us who stick our flatscreens up on the wall need a rack on which to store our other home cinema kit. So it's important to choose a unit that works well as a standalone piece, rather than looking like a stand that's missing its screen. Step forward the Verona Series, which has a semi-enclosed design, curved edges and open area shelving and is designed to look the part with or without a TV on top. Available in three

sizes to suit screens up to 37in, 47in and 55in respectively, the stands have a black glass and high gloss finish.

www.omnimount.com

HCC VERDICT

For proud owners of kit, who aren't ashamed to show it off

Clips...

Small items that will make a big difference to your system

Crystal Acoustics CES-5R-LL Energy Saver



From £15

Most electronic devices are never truly switched off and consume

electricity in standby mode.
This five-way extension socket reduces energy consumption by completely turning off the power to devices when they are not in use. It even has an ingenious Load Learning function that learns the standby power level of connected devices, and cuts off power automatically when they fall into standby mode.
www.crystalaudiovideo.com

Furutech ADL Alpha Line cables



Approx £75/m You can't always measure the precise improvement,

but it's always worth upgrading bog-standard cables. Furutech is hoping its latest phono cables will do just the job. Constructed from U-OFC copper (removing oxygen removes Iron Impurities that can raise resistance) they have copper alloy 24k goldplated connectors and Tefion insulation.

www.soundfowndations.co.uk

Verbatim SuperSpeed USB 3.0 portable hard drives



Approx £80
With USB 3.0
offering a 10-fold
increase in data
transfer rates
(up to 4.8 Gbit/sec)

compared with USB 2.0 it could be a good time to invest in one of Verbatim's 1TB Store 'n' Go hard drives. Compact and lightweight, they have energy-saving software built in plus Nero BackitUp and Bum Essentials. They come in neon colours such as yellow, pink and green or black and silver for the more executive-minded. www.verbatim-europe.co.uk

Home is where your system is

TECHNOLOGY AT THE HEART OF YOUR HOME!

The opportunities for a technologically up-to-date home have never been greater or more cost-effective than today. Listening to music through a good quality system has long been recognised as one of the most beneficial activities we can indulge in to help us relax, especially after a stressful day. However, we now have home cinema systems with incredible picture and sound quality available to us, that can provide a very different form of relaxation through a nailbiting adrenalin rush or laugh-aminute humour. We can access many hundreds of internet radio stations, stream music from computer harddrives, or have full 3D Blu-ray High Definition films delivered onto large plasma, LCD or LED TV screens, or even have that true cinema experience with a projector and screen.

For many people, the choice is so great that it can be a daunting task to even make a start. Asking a 'tekkie' friend or two might be helpful but, unless they possess professional knowledge, it is only likely to give you a small part of the picture. Going to a large multiple store for advice is also very unlikely to be fruitful as the average level of knowledge among such store staff is mediocre at best. That is why an independent group of specialist stores have got together to help make people aware of their skills and expertise. All of the TOP20UK dealer grouping are carefully selected stores with exceptional knowledge to specify, supply and install home control and home entertainment systems, from budget through to state-of-the-art wholehouse super systems. These specialist stores represent the best in the industry and have been chosen because they are known to have the necessary expertise.

A technological world at your fingertips

Modern whole-house systems often now include home control systems that can integrate, for example, CCTV security, electric gates, lighting, and powered curtains or blinds by means of custom-programmed wall pads, touch-screen



remote controls or movement detectors. Home entertainment systems can include home cinema, music distribution and internet networking. To specify a cohesive and comprehensive solution to meet an individual client's requirements requires considerable up-to-date product knowledge, both in terms of general market availability, standard of performance, functionality and reliability but also the ability to make all the different products work together seamlessly.

Achieving full potential

The TOP20UK dealers often work closely with architects, developers and builders as well as individual clients and can advise on all the available options. Loudspeaker options alone include invisible plastered-over speakers, artwork-finished speakers, wall-mounted, floor-standing or in-ceiling models. Part of the art of a good specifier

and installer is to ensure all the right cables are discreetly installed in the right locations for full-functionality and to cover future upgrades as technology continues to advance. Although there are many individual 'installers' and businesses offering these type of services, the genuine experts in this field are few and far between. Many new home or major refurbishment projects undertaken by specialist dealers often take many months to come to full fruition, for the capability is built into the house during construction. Single-room home cinema systems are much quicker and simpler to complete, but the level of performance is greatly dependent on the installation as positioning and setting-up can make a huge difference. A high-quality home cinema system is not a suitable DIY project as the majority of systems selected and installed on this basis (that is without professional input) perform way below their optimum level.

of home cinema systems selected and installed on a DIY basis (that is without professional input) are performing at way below their optimum level.

Understanding your options

Although a great sound system is important for good home cinema, a high quality hi-fi system in the home is still a 'must have' for music lovers, whether listening to classical, heavy rock, country, or popular radio stations. The iPod has become a very common method of storage and delivery but, unfortunately, most people using them download their selection at a very low quality level. The MP3 format was designed for use when download speeds were very slow and storage (memory) was expensive. That's all changed but the most popular download speed is still 128 Kbps, which is about one-eleventh of CD quality. Play this through a decent hi-fi system and all you get is a very poor quality sound made louder. The incorporation of a really good music system into a multi-room home entertainment system is another specialist skill that the TOP20UK dealers have in their armoury. They will ensure that a wide range of inputs, such as CD, radio, music servers, or even iPod docks are catered for, together with ease of use, which is crucial to the level of enjoyment

Getting the best deal

So if you are thinking of purchasing any part of the range of home entertainment equipment available that will help make your home a richly rewarding environment to inhabit, the best place to start is not with WHAT but WHERE. Find a dealer who falls into the expert category, one who can provide the specialist knowledge required to get it right first time. There's no better place to start than the TOP20UK dealers listed on the right.

LISTED BELOW ARE 20 OF THE BEST AV SHOPS IN THE COUNTRY.

They have been selected because they are known to do an excellent job in guiding customers towards home cinema systems that will provide years of superlative performance and total satisfaction.

STAR QUALITIES

 VALUE FOR MONEY ★ ★ ★ ★

 SERVICE ★ ★ ★ ★

 FACILITIES ★ ★ ★ ★

 VERDICT ★ ★ ★ ★



FREE Home/Site Survey Worth £100+Vat

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minimum £100+vat) with a
systems expert from the TOP20UK
Specialist Home Entertainment
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without any obligation!!
The value of the voucher will also
be credited against any purchase
(over £1,000 in value).

Visit: www.top20uk.info and go to 'Vouchers' and enter code HCC50

OUR TOP 20 UK SPECIALIST AV DEALERS

SOUTH

Chelmsford RAYLEIGH HI-FI SOUND & VISION

216 Moulsham Street. 01245 265245 www.rayleighhifi.com

Colchester RAYLEIGH HI-FI SOUND & VISION

33 Sir Isaac's Walk. 01206 577682 www.rayleighhifi.com

Kingston-upon-Thames INFIDELITY

9 High Street, Hampton Wick. 020 8943 3530 www.infidelity.co.uk

Maidenhead AUDIO VENUE

36 Queen Street. 01628 633995 www.audiovenue.com

Rayleigh, Essex RAYLEIGH HI-FI SOUND & VISION

44a High Street. 01268 779762 Custom Install Dept. 01268 776932 www.rayleighhifi.com

Southend-on-Sea RAYLEIGH HI-FI SOUND & VISION

132/4 London Road. 01702 4352SS www.rayleighhifi.com

Tunbridge Wells KENT HOME CINEMA

69 London Road, Southborough. 01892 S3S007 www.kenthomecinema.co.uk

LONDON

Ealing AUDIO VENUE

27 Bond Street. 020 8S67 8703 www.audiovenue.com

N1 GRAHAMS HI-FI

190a New North Road. 020 7226 SS00 www.grahams.co.uk

SW11 ORANGES & LEMONS

61-63 Webbs Road, Battersea. 020 7924 2040 www.oandlhifi.co.uk

MIDLANDS

Coventry FRANK HARVEY HI-FI EXCELLENCE

163 Spon Street. 024 76S2 S200 www.frankharvey.co.uk

Nottingham CASTLE SOUND & VISION

48/S0 Maid Marian Way. 011S 9S84404 www.castlesoundvision.com

Solihull MUSIC MATTERS

93-95 Hobs Moat Road. 0121 742 0254 www.musicmatters.co.uk

NORTH

Chester ACOUSTICA

17 Hoole Road. 01244 344227 www.acoustica.co.uk

York SOUND ORGANISATION

2 Gillygate. 01904 627108 www.soundorg.co.uk

SCOTLAND

Aberdeen HOLBURN HI-FI

441 Holburn Street. 01224 S8S713/S72729 www.holburnhifi.co.uk

Glasgow GLASGOW AUDIO

135 Great Western Road. 0141 332 2200/4707 www.glasgowaudio.com





The majority of the above dealers are members of one or both of the major trade organisations, BADA or CEDIA.





White, black or silver

Say hello to my new nearly-bespoke aluminium wizard...



Design it yourself: Choose your own sound setup, as well as finish and

mount style

oewe's individual 40 Compose looks positively sumptuous lin its high gloss white finish, especially as that finish wraps right around the TV's slim rear.

Aluminium Black and Aluminium Silver core colour options are also available, and that's just the start of the choices. You can also choose the inlay panels down the TV's sides from a myriad of finishes. There's a range of stylish mounting options, too, including the chrome, cross-based floorstand we used.

You can even select the exact feature configuration of your set, including its sound specification. For us this meant plumping for Loewe's Sound Projector speaker bar, which came in matching high-gloss white and attached elegantly to the stand.

Giant memory

A truly impressive set of features accompanies the screen's extreme elegance. Particularly startling is its built-in PVR, complete with a colossal 250GB of internal memory.

Then there are the set's multimedia talents, which include full access to files stored on a DLNA PC, playback of video, photo or music files from USB storage devices, and the ability to access online content

including internet radio stations, video podcasts and 'web TV' channels.

The interface for all the multimedia stuff is superbly presented and organised, and more content is certain to come now Loewe has joined forces with Philips and Sharp when it comes to sourcing online services.

The most truly startling thing about the Individual 40, though, is how brilliant its pictures look. Past issues with over-heavy processing and inadequate black levels are massively reduced with the new edge LED panel. indeed, blacks achieve a depth and naturalism that I didn't think Loewe was capable of.

What's more, it became apparent during a run-through of Avatar on Blu-ray that the black levels don't require the sacrifice of too much brightness, leaving pictures looking extremely punchy and colour-rich, even during dark scenes.

The latest Individual 40 also hits all the right notes with its sharpness, reproducing every nuance and detail of the exemplary *Avatar* transfer with aplomb. Its 400Hz and proprietary Image+ processing suppress motion blur without leaving the picture looking unnatural or noisy – so long as you handle both features with care.

→ Tech Labs







White screen: Slightly higher than normal for a 40in LED TV, but it does includes the sound projector Test footage: A modest drop in energy consumption with live footage

TV contrast: ratio

Colour temp: Kelvin





And outstanding contrast ratio figure, and well above Loewe's curiously low specification. A bright picture is guaranteed from this TV

Presets: Stick to the 'soft' preset for the most accurate colour temperature. Intense: 11,600K Normal: 9,334K Soft: 6,876K

Standard-definition pictures are also upscaled extremely well, while the audio from the Sound Projector is nothing short of jaw-dropping, complete with oodles of bass, a powerful and open mid-range, and effortless, harshness-free trebles. There's even a sense of surround sound, for heaven's sake. Buyers that eschew this add-on will save money, but miss out.

There are issues with the Individual 40 Compose. Its onscreen menus are fiddly, and it really isn't for the financially faint-hearted; the kit tested here totals around £5.5k. Also, its pictures lose contrast and colour if viewed from a wide angle.

But the latter problem is true of almost all LCD TVs, while the price is both understandable given the cost issues associated with offering a near-bespoke service, and ultimately kind of irrelevant to the punter Loewe is targeting anyway.

In fact, the only thing that really matters is that a Loewe flat TV finally has the performance and feature chops to go with its design prowess. At this price, Sony, Samsung et al won't be quaking in their boots, but Bang and Olufsen should be...

Lights fantastic

A sleek black finish and Ambilight tech make this Philips a good-looking set



Just hangin' in:
The lack
of a Freeview
HD tuner is
an odd
shortcoming

Ince its early days, Philips'
Ambilight feature has gone from strength to strength, now matching the content of the image being shown with startling accuracy, as well as adapting itself to the specific colour of your walls.

But we haven't included the 40PFL8605H in this roundup just because of Ambilight, though – it also features an unusually narrow gloss black bezel, offset by a transparent shroud wrapped around the outer edges, and a 'single-layer' finish created by a glass top sheet across the bezel and screen.

And it's packed with features, kicking off with 3D playback via a bundled 3D accessory pack.

Video processing, meanwhile, includes a 200Hz system and Philips' exceptionally powerful Perfect Pixel HD engine, which works on everything from motion through to colour, sharpness and contrast.

Then there's its NetTV online functions, which combine ring-fenced content with open internet access via an integrated Opera browser. You can also play media files from either DLNA PCs or USB storage devices.

The only surprising feature shortcoming is that there's no

Freeview HD tuner in the set – just the standard-definition version. This may make it a no-go for some buyers.

True blue

The 40PFL8605H's picture performance depends on how many dimensions it's dealing with. With normal 2D material it's outstanding. Colours are spectacularly intense without sacrificing subtlety where it's required, such as with the precise skin tones of the *Avatar* Blu-ray.

Black level response is terrific by edge LED standards, too, just edging out Loewe's screen in this roundup.

Having vibrant colours alongside good blacks obviously helps pictures look dynamic and punchy, but they're also scintillatingly sharp with both high and standard-def material.

Motion blur and judder are both minimal. In fact, you can almost eliminate the latter via the set's motion processing tools. The only problem is that raising the level too high can leave pictures looking over-cooked.

You have to handle all the elements of the 40PFL8605H's processing with care, as almost all of them can make pictures look worse if you run them too hard. If you stick to

→ Tech Labs







White screen: Our 100IRE test showed that this Philips uses a typical amount of energy for a 40in LED. Test footage: Another slight drop when watching movie footage

TV Contrast: ratio



Claimed 500,000:1 Actual 406,777:1



Picture: Our real-world contrast ratio of 406,777:1 is excellent – and our Dynamic measurment of 505,657:1 exceeds even Philips claims Presets: White balance was a little further away from D65 then we would have liked. After fine-tuning we were able to achieve perfect 6,500K. Normal: 8,657K Warm: 6,103K Cool: 11,583K Custom: 12,318K

this advice and you'll get exceptional 2D pictures.

Sadly, this is not the case with 3D. While the screen does well at maintaining brightness and colour richness with 3D material, it falls foul of that all-too-common LCD 3D problem of crosstalk, where edges ghost badly around objects in the mid-to-far distance.

Since not all the other contenders in this grou test even have 3D, and with the 40PFL8605H also delivering above-par audio, is it fair to knock it for not performing particularly well in that single area?

Ultimately, I guess it depends on how important the 40PFL8605H's 3D feature is to you. The lack of a Freeview HD tuner remains a problem for all, though, and there's another issue, too, ironically caused by one of the TV's key design elements. For the screen's glass front causes quite a lot of reflections if you have the TV in a fairly bright room.

So, in the end I am forced to conclude that the 40PFL8605H is a only a really great TV if you can work around its limitations.

At home with an icon

So feature-packed, you wonder how they got it all into such a slim chassis



Silver service: Samsung's 8000 series screen eschews the gloss black

trend

he thinness of the UE46C8000 is extraordinary, coming in at just 23.9mm at its deepest point. So thin is it, in fact, that Samsung has to supply a series of adapters with the TV so it can take traditional inputs such as RF cables, Scarts and LAN connectors.

Ultimately, your head struggles to comprehend how something so thin can produce real TV pictures, while housing a very healthy set of features.

One last point to make about the design of the UE46C8000 is that it features slots you can access from the side, which make it an easier candidate for wall-hanging than many slim TV rivals.

Aside from the need for adapters, meanwhile, the UE46C8000's remarkable design hasn't led to any connection compromises either, with the set delivering a full suite of four HDMis, a LAN port, two USBs, and a D-Sub PC port, among other things.

Even better, some of the provided jacks have multiple uses. The LAN port does triple duty as Freeview HD support, a hookup to a DLNA PC, or a means of accessing Samsung's content-rich internet@TV ringfenced TV platform that includes LOVEFiLM.com, the BBC iPlayer, YouTube, Facebook and Twitter.

You can also access the DLNA and online functions wirelessly if you add an optional Wi-Fi dongle to one of the USB ports, thereby adding play back of an impressive range of multimedia file formats, or record stuff from the Freeview HD tuner to a seemingly wide variety of USB storage devices.

Bright spark

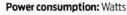
Making the UE46C8000's slimness even harder to comprehend is the fact that it's able to produce phenomenally bright pictures.

Colourful scenes are driven out with almost luminous intensity, creating a visceral impact that's handily reinforced by some sterling HD sharpness and very dynamic colour saturations.

Not surprisingly, all of this proves immensely satisfying during your first few hours with the UE46C8000, especially if you spend the majority of your time watching animated fare, HDTV and playing console games.

it does no harm at all, either, that the UE46C8000 does a good job of handling motion, with minimal judder and blur, and that it's unusually talented at upscaling standard-definition sources, making them look sharp without

→ Tech Labs







White screen: Average energy consumption from this size television Test footage: We measured a modest decrease in energy usage during live footage

TV Contrast: ratio

Claimed N/A Actual



Picture: Another impressive LED-lit contrast ratio, and we measured a dynamic contrast of 499.997.1.



to achieve that temperature Cool: 11,522K Normal: 10,279K Warm 1: 9,010K Warm 2: 7,772K

exaggerating noise or losing colour tone naturalism.

There are some downers to the UE46C8000, though. First and worst, the set's 3D performance is rather average, thanks to the appearance of some obvious crosstalk noise, and the fact that motion doesn't look too good in 3D until the TV has warmed up for at least an hour.

The set excels when it comes to colour response and contrast in 3D mode, but it's the crosstalk double ghosting issue that ultimately makes the most impact.

My other concern with the UE46C8000 is that in pushing brightness to help its 3D performance, it doesn't deliver black levels — at least during 2D viewing — that are as convincing as i'd usually expect from Samsung.

Sonically I am pleased to say the UE46C8000 improves slightly on the feebleness of Samsung's first generation of super-slim edge LED TVs. But don't get too excited by this, for it only means that the screen's audio performance is average. It's nothing special by any means.

The UK's No.1 iPad App*





T3 iPad March edition is available to download on iTunes in February 2011

Two-tone Bravia

This Sony offers excellent black levels – and can be bought with a white bezel



Easily LED:
Sony's
inconsistent
backlight
issues are a
thing of
the past

ony's Monolithic TV styling is sported here by the 40NX703 and is all about towering minimalism. The bezel is finished in a single layer, with a glass topsheet unifying the bezel and the screen and the rear end is slim at just 64mm. You can get the TV in either black or white – we've shot the white finished model, here, but you may prefer the darker, more discreet look.

The thing that most sets the 40NX703 apart from the pack, though, is its nifty, optional silver bar desktop mount. This lovely slab of metal allows the TV to slot into its centre, and lets you adjust the set's angle to lean back by 6° if standing it upright doesn't suit. What's more, the bar support has been perforated to enable sound from the TV's basemounted speakers to emerge freely into your room.

This stand option (costing £329) is clever, unique and mighty stylish, but you can still mount the set on the regular supplied desktop stand and save pennies.

in terms of connections, four HDMis are on hand for HD/digital video duties, while masses of multimedia provision comes from a LAN socket and a USB port. The LAN is particularly significant, as it permits streaming from DLNA PCs and access to Sony's Bravia internet Video online platform. The latter is the most content-heavy and fulfilling online TV system to date, with highlights including LOVEFILM, YouTube, the BBC iPlayer, Sony's new Qriocity film-rental service, and Demand Five.

The single USB allows playback of video, photo and music multimedia files, and can enable Wi-Fi via an optional dongle.

Pictures, meanwhile, are driven by a processing combination of Sony's Bravia Engine 3 and 100Hz, with the full HD panel illuminated by an edge LED system.

The only weakness among the Sony's feature set is a lack of fine-tuning colour tools, although the onboard Real Colour Processor does a decent colour tone job.

Backlit perfection

Sony has had issues recently with serious backlight inconsistency problems, but, thankfully, the 40NX703 gets off to a great start. During very dark scenes on my *Avatar* Blu-ray, it was noticeable that blacks looked pretty consistent across the screen. in fact, it's the most

→ Tech Labs







White screen: A very energy-efficient TV. Well done Sony!

Test footage: Consumption does increase somewhat with live footage

TV Contrast: ratio





Picture:
A commendable real,
world contrast ratio,
but it falls short of
most of its competitors.
We measured a
dynamic contrast
of 50.828:1

Presets: Colour accuracy was good out of the box with the Warm 2 preset. With a few tweaks we were able to achieve perfect 6,500K white balance Cool: 10,509K Neutral: 9,632K Warm 1: 8,156K Warm 2: 6,741K

believable black performance I've seen to date from an Sony TV.

The 40NX703 builds nicely on this with some really intense and bold colours. Crucially, though, this vibrancy is partnered with powerful colour processing, resulting in some deft touches when it comes to colour blends and tonal range.

Another strength of the 40NX703 is the way it retains clarity during action scenes, thanks to the set's effective motion processing tools. These aren't overbearing when in use either, provided you stick with the TruMotion 100Hz engine's Standard setting, which leaves the picture looking natural rather than forced.

The 40NX703's colours and contrast reduce during off-axis viewing, the TV's front panel can reflect direct light a little heavily, and its HD pictures aren't quite as crisp as normal for Sony. But with some good standard-def upscaling and a passable if hardly earth-shattering audio, the 40NX703 remains a seriously attractive combination of form and function.

Flakey Danish pastry

Despite its classy Scandy design, Toshiba's offering is a disappointment



Ne-er α twitch: The 46VL758's motion handling is commendably smooth oshiba is turning its sights up-market with this TV, and the main focus of its premium attentions has been the TV's design.

In fact, the brand has farmed out the styling to the world-acclaimed Jacob Jensen Design.

Up close, there's no doubt the Danish design studio has done a nice job. The main body is superbly well made with scarcely a trace of plastic, and sits (optionally) on a really lovely desktop stand of brushed aluminium. The set's edge LED lighting allows it to be exceedingly slim (less than 3cm) and there's a delicious touch-sensitive array of buttons on the bezel, which illuminates in use.

But the design is also rather subtle, so that from a typical viewing distance, positioned in a corner or flat to a wall, the set looks just a bit underwhelming. Or, at least, not as special as the design pedigree would have you expect.

The TV's connections – many of which can be accessed from the side – are prolific. Four HDMIs and two USBs mark the highlights, with an Ethernet port partnering a Freeview HD tuner. The USBs deliver playback of JPEGs, MP3s and DivX (including HD), and can also enable Wi-Fi via an optional dongle.

The caveat to DNLA streaming is that, while you can stream multimedia files from PCs, you'll only easily get high-quality video if you've got a Windows 7 PC. And while the 46VL758 has iPlayer and YouTube support, that's it in online terms, leaving Toshiba looking well behind its rivals in this key respect.

No satisfaction

Despite providing a startlingly expansive suite of picture calibration tools, including a full colour management system, the 46VL758 doesn't deliver especially satisfying pictures, either.

This is particularly sad because actually many of the key ingredients to excellent picture quality are present and correct. Colours look dynamic, rich and natural, for instance, and **brightness** is intense and eye-catching. Motion is handled quite nicely by the onboard 100Hz engine, too, and aside from an occasional twitch, suppresses blur and judder well.

The set also does an solid job of upscaling standard-def thanks to Toshiba's Resolution+ scaling engine. So long as you don't set this processing any higher than its '3' level, it adds bags of detail and

→ Tech Labs







White screen: A very good power consumption result from Toshiba's designer screen

Test footage: It used a tiny bit more energy while watching movie footage.

TV Contrast: ratio



Colour temp: Kelvin



Picture: A very low contrast ratio for a modem LED television. On the bright side, we measured a dynamic contrast of 41,246:1 and an excellent luminance of 120.4fL. Presets: Of the 11 presets available, 'I' delivers a very accurate white balance of 6,510K, 0: 5,990K 1: 6,510K 2: 7,084K 5: 8,249K 10: 11,599K

sharpness to SD images without making them noisy.

The 46VL758's downfall is that old edge-LED bugbear of an inconsistent backlight. During dark scenes, each corner of the picture looks lighter than much of the rest, with two or three additional patches of extra brightness elsewhere. This all leaves dark scenes looking, well, quite a mess, frankly.

Black levels aren't innately bad, and you can reduce the inconsistency problem if you ramp down the set's brightness, but this leaves pictures looking rather muted and drab.

Joining the 46VL758's flawed pictures are some depressingly underpowered speakers. They only just cope with normal chatshow material, so you can imagine how they distort into a mush of harsh trebles, overcrowded mid-range and zero bass when pushed hard by any of Avatar's aurally advanced battle sequences.

All in all, Toshiba's WL758 has to class as a disappointment – a fact which doesn't make its relatively high price tag look particularly attractive, either.

Final standings

ach model in this roundup delivers gorgeous, roomenhancing looks – and many have also been unexpectedly good AV performers, too.

Even the weakest contender. Toshiba's 46VL758, can produce some terrific pictures with the right sort of material. It's just a shame this material is only bright, colourful stuff, with dark scenes losing credibility thanks to some marked backlight inconsistencies.

The joint-third placed sets, Philips' 40PFL8605H and Samsung's 46C8000, house very impressive sets of online tools to match their sumptuous designs. With its open internet access, Philips' TV will appeal to people who want to surf the web at will, and it offers some excellent 2D pictures. Only its 3D pictures let it down, owing to crosstalk noise - a problem shared by the Samsung rival. But the latter redeems itself with excellent features, including online 'apps' and video, and 2D picture quality.

My runner up is Sony's 40NX703: proud producer of some truly superb picture quality and a gorgeous looker if you treat yourself to its innovative 'bar' stand option. It also enjoys class-leading online features, and is the designer TV I'd recommend for limited budgets.

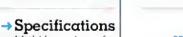
If money's no object to you, however, my winner is Loewe's Individual 40 Compose Slim. This is quite possibly the most exquisitely designed and built TV I've tested in HCC, and its looks are startlingly adjustable to suit your tastes in terms of colour, speakers and stand. No other TV around delivers on bespoke choice better than this contender.

Add to the mix the best picture and sound quality Loewe has ever delivered from a TV, and one of the best all-round AV performances on the market - and we have an unexpected but certainly worthy - if not mainstream - winner. Best start saving now, then •









some buyers HD Ready: yes 1080p24 Tuner: YES Freeview HD with Ci slot Component video: ves one HDMi: YES three v1.3 PC Input: YES D-Sub Resolution: 1,920 x 1,080 Sound: 2 x 20W from TV, but multiple sound upgrades available include the Sound Projector speaker bar tested here Brightness (claimed): 450cd/m² Contrast ratio (claimed): 5,000,000:1 Dimensions (screen): 1,000(w) x 617(h) x 60(d)mm Features: 400Hz processing; edge

LED lighting; online functions include net radio and video podcast support; built-in 250GB PVR; JPEG, MP3 and video playback from USB; streaming from DLNA PCs; Image+ processing; noise reduction



HCC VERDICT

Sony 40NX703 £1.000 Approx

Highs: Very elegant design especially with the optional stand; excellent picture quality

Lows: Limited viewing angle; HD could be sharper; could be cheaper

Performance: 02905 Design: 02935 Features: 02305

Overall: 123

→ Specifications

1 Scart (RGB)

3D: No Step up to NX713 for that Full HD: ves Tuner: yes Freeview HD Component video: yes one HDMI: YES 4 X V1.3 PC input: YES D-Sub Resolution: 1,920 x 1,080 Sound: 2 x 10W Brightness: N/A Contrast ratio (claimed): 'High' Dimensions: 793.7(w) x 494.3(h) x 78(d)mm Weight: 9.4kg Features: Ethernet connection for Freeview HD and DLNA PC; MPEG noise reduction; film mode; digital noise filter; shadow detail booster; fleshtone adjust; gamma adjust;





HCC VERDICT

Philips 40PFL8605H £1300 Approx

Highs: Slick design especially with Ambilight on; good connections; strong multimedia talents Lows: Reflective screen; significant crosstalk with 3D viewing

Performance: 12849 Design: 02305 Features: **02335**

Overall: 1 2 3 4

→ Specifications

3D: yes Active Shutter Full HD: YES 1080p24 Tuner: vss Freeview (not HD) with CI slot Component video: ves one HDMI: ves four v1.4 PC Input: vss D-Sub Resolution: 1,920 x 1,080 Sound: 2 x 10W Brightness (claimed): 450cd/m² Contrast ratio (clalmed): 500,000:1 Dimensions (screen): 965(w) x 600(h) \times 50(d)mm Weight: 17.5kg

Features: 200Hz processing; edge LED lighting; online functionality including ring-fenced and open Internet access; JPEG, MP3 and video playback from USB; streaming from DLNA PCs; Perfect Pixel HD processing; noise reduction; Ambilight Spectra 2; 3D capable



HCC VERDICT

Samsung 46C8000 £1,700 Approx

Highs: Beautiful metallic finish and slim design; bright and colourful pictures even with 3D Lows: Very obvious crosstalk; black levels not the best with 2D footage

Performance: 12945 Design: 02335 Features: **02345**

Overall: 4

→ Specifications 3D: yes Active Shutter

Fuil HD: yes 1080p24 Tuner: yes Freeview HD with CI slot Component video: yes one HDMI: yes four VI.4 PC Input: yes one D-Sub Resolution: 1,920 x 1,080 Sound: 2 x 10W Brightness (claimed): N/A Contrast ratio (claimed): N/A Dimensions (screen): 1,090.8(w) x 662.8(h) x 23.9(d) mm Weight: 17kg Features: 50 x 16 Clear Motion Rate processing; edge LED lighting; online functionality via ring-fenced internet@TV platform; JPEG, MP3 and video playback from USB; streaming from DLNA PCs; 30 HyperReal processing; noise reduction; local dimming; extensive picture calibration aids including 10-point gamma adjustment



HCC VERDICT

Toshiba 46VL758 £1,500 Approx

Highs: Excellent build quality; good connectivity and setup flexibility; good colours and sharpness Lows: Inconsistent backlight; limited online functions; feeble audio

> Performance: 02939 Design: **02345** Features: 12945

Overall: 1 2 3 4

→ Specifications

Resolution+ upscaling

3D: No Get the WL768 instead Full HD: yes 1080p24 Tuner: vzs Freeview HD with CI slot Component video: vzs one HDMI: vzs four v1.3 PC Input: vzs one D-Sub Resolution: 1,920 x 1,080 Sound: 2 x 10W Brightness (claimed): 430cd/m²
Contrast ratio (claimed): 7,000,000:1
Dimensions (screen): 1,092(w) x 662(h)
x 28.9(d)mm Weight (kg): 25.5kg Features: Active Vision processing, 100Hz, edge LED lighting; online functions comprising YouTube and iPlayer; JPEG, MP3 and DivX HD playback from USB; streaming from Windows 7 DLNA PCs; noise reduction; colour management; gamma fine tuning;



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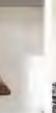


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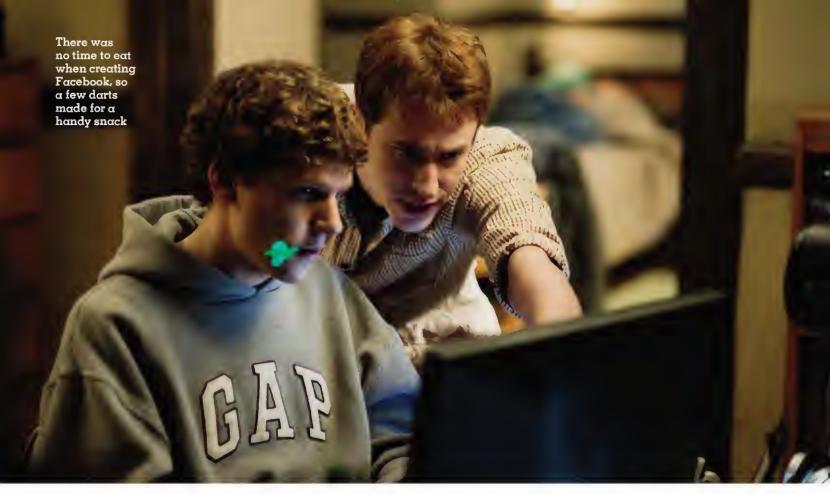
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PLAYBACK

→ Software highlights THE SOCIAL NETWORK Award-scooping blockbuster is not just about Facebook CAPRICA Part One of the Battlestar spin off arrives on DVD THE OTHER GUYS Comedy cop capers with some inventive BD extras JONAH HEX Josh Brolin and Megan Fox cavort in the Wild West BRIGHTON ROCK The 1947 original gets an HD upgrade AND MUCH MORE!





Smart Alecs in wonderland

Thought-provoking movie is as smart a production as the subject matter it depicts



HCC VERDICT

The Social Network: 2-Disc Edition → All-region BD £25 Approx

We say: 2010's best film is also a favourite for 2011's best Blu-ray.

Picture: **02939**Sound: **02939**Extras: **02949**

Movie: 1 2 3 4 5

Overall: 1 2 3 4 5

The Social Network may seem

to be about the creation of Facebook, but it's so much more than that. Director David Fincher and writer Aaron Sorkin have used Ben Mezrich's book The Accidental Billionaires as the basis for a rich and rewarding intellectual property battle/morality play, albeit one that is almost indecently smart. Fincher's direction is as assured and fastidious as ever, but it's Sorkin's script that is the real star. Loaded with genuine wit and wisdom, it transforms what could be a dry and technical history lesson into one of the most engrossing and invigorating Hollywood films in years. Chris Jenkins on picture: Excellent contrast and

clarity are the most obvious hallmarks of the film's terrific AVC 2.40:1 1080p encode. While the movie opts for a rather muted palette, there's never a lack of fine detail or textures, and those sequences that are more colourful look simply fantastic. Despite being shot digitally, the film offers up a surprisingly natural image that is about as close as the format has come to replicating a film shot on celluloid.

Mark Craven on audio: Given that the story of Facebook deals with computer nerds and legal meetings, you might not expect too much from the film's DTS-HD MA 5.1. But, oh, how wrong you'd be. Regular Fincher collaborator, Ren Klyce, serves as sound designer once again and, together with Trent

Reznor and Atticus Ross who provide the film's original music, has delivered yet another of his intricately detailed and remarkably potent soundscapes. It's also surprisingly rich in tight bass, particularly the visit to the Ruby Skye nightclub in Chapter 12, which will shake your room to its very foundations. Best of all, though, is the fact that none of this ever threatens to overwhelm the dialogue, which is cleanly rendered and pinned to the centre speaker.

Anton van Beek on extras: Another David Fincher film, another batch of impressive supplementary material that does its best to dig into every aspect

of production. Sensibly, most of the material is given a disc of its own to save on the bitrate for the film itself, meaning that the only extras on Disc One are a BD-Live link and a pair of audio commentaries. Fincher does the first as a solo track and, as always, digs deep into the filmmaking process. The second is a piecemeal affair with writer Aaron Sorkin and cast members sharing their thoughts on making the film and the material.

The major extra on Disc Two is the four-part 93-min documentary How Did They Ever Make a Movie of Facebook? This ridiculously detailed look at the making of the film covers everything from casting to costume selection and production design to the shoot itself, via interviews and behind-the-scenes footage. A must-see.

Devil

Universal Pictures → All-region BD £25 Approx



The first of M Night Shyamalan's Night Chronicles finds five strangers trapped in a lift and being killed

off one by one. What could have worked as an episode of the Twilight Zone is here stretched to breaking point at 80mins. Pity, then, that nobody thought about using all that extra time to sort out the gaping plot holes in this frustrating flick. The Blu-ray's VC-1 2.40:1080p visuals are hit and miss, with great looking detail sitting alongside shots plagued by crushed blacks. The DTS-HD MA 5.1 audio is better, thanks to some spooky use of the surrounds. Paltry extras, too. AvB



Grown Ups

Sony Pictures → All-region BD → £23



Never before in the annals of history have so many comedy stars - Adam Sandler, Kevin James,

Chris Rock, David Spade and Rob Schneider - come together to so little effect. This tiresome family comedy could well be the least funny film any of the cast has appeared in, content to marry fart gags and pratfalls with shameless sentiment in the hope of teaching us some kind of life lesson. A lack of fine detailing in the AVC 1.85:1 encode and a front-heavy DTS-HD MA 5.1 mix also makes for a limited HD experience. A commentary and endless featurettes are 'bonus' features. MC



The Town

Warner Home Video → All-region BD/ R2 DVD→£25 Approx



Ben Affleck takes centre stage on screen, as well as stepping back behind the camera for this

cracking, Boston-based heist movie. Predictable in places, The Town is a riveting watch, thanks to Affleck's growing stature as both an actor and director. This Blu-ray release offers up a beautifully detailed 125min AVC Theatrical Cut and a 150min Extended Cut (via seamless branching), with an explosive DTS-HD MA 5.1 mix.

Extras are limited to a commentary from Affleck and six Focus Point featurettes, plus a DVD and Digital Copy of the film. AvB

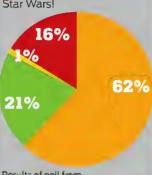


We asked you...

Which Star Wars Blu-ray boxset will you be getting?

- Star Wars:
- The Complete Saga
- Star Wars: Original Trilogy
- Star Wars: Prequel Trilogy
- None of them i hate

Star Wars!



Results of poll from www.homecinemachoice.com

Marky Mark and the Funny Bunch

Who ever knew Mark Wahlberg could be this hilarious?

The Other Guys is the latest collaboration from director Adam McKay and actor Will Ferrell, and finds the duo returning to the glorious highs of Anchorman. A superb send-up of the buddy cop genre, the film stars Ferrell and Mark Wahlberg as detectives Gamble and Hoitz, the back-office cops who do the paperwork while the high-profile heroes do all of the exciting stuff. But when New York's top cops are killed in action, it's time for the pair to step up to the plate and show that they've got what it takes to keep the city safe. Chris Jenkins: The Other Guys blasts its way onto Blu-ray with the kind of spectacularly cinematic 1080p encode we've come to expect from a Sony Pictures new release. The AVC 2.40:1 imagery is sharp and exquisitely detailed, as demonstrated by the stylish drinking sequence in Chapter 13 where the camera moves through a seamless montage of Gamble and Hoitz's exploits. Blacks are rock solid, colours are rich, film grain feels entirely natural and there's no heavy-handed digital manipulation or any technical flaws. Mark Craven: Drawing from the buddy cop movies it sends up, The Other Guys features an immersive DTS-HD Master Audio 5.1 soundtrack that makes full use of the entire soundstage. While the all-important dialogue is crystal clear, ensuring you never miss any of the jokes, it's the rest of the mix that leaves a lasting impression – be it the sound of cars swinging from left to right and back again as they chase each other through the streets of New York City, explosions packing a hefty bass kick or the boardroom shootout in Chapter 13 that'll have you ducking for cover as bullets fly all around the room.



Anton van Beek: If nothing else, The Other Guys does serve up a Blu-ray first - that of the 'Mom'umentary. Rather than bringing in the cast and crew to talk about the film, this feature-length chat-track gives the mothers of Adam McKay, Will Ferrell and writer Chris Henchy a chance to offer their thoughts on the film, their sons' careers and the difficulties of washing tea and coffee stains out of a white shirt. This packed disc also delivers 107-min Theatrical and 116-min Extended cuts of the film via seamless branching (with an optional Additional Footage Marker to point out the new bits), MovieiQ, a BD-Live link, 30 mins of deleted/ extended scenes not featured in either cut of the film, witty Flash Forwards showing the aftermath of some of the events featured in the film (the Paris Hilton one got a chuckle out of me), a Pimps Don't Cry music video and endless, jokey, behindthe-scenes featurettes and interviews.



HCC VERDICT

The Other Guys → Sony Pictures → All-region BD → £23 We say: A superb HD outing for this fun action/comedy mix

Picture: 02909 Sound: 02939 Extras: 12345

Movie: 123

Overall:

The Illusionist

Pathé → R2 DVD → £20 Approx



Based on a script by French comic actor and director, Jacques Tati, this movie is a must-see for fans of

animation. With a storyline that's moved from Paris to Edinburgh (home to director Sylvain Chomet), the mostly wordless film has, criminally, been denied an HD release in the UK. it 'didn't make financial sense', according to the studio – although a French BD is available to import. The UK DVD holds up fairly well with a slightly flat anamorphic 1.78:1 transfer and melodic DD 5.1 soundtrack, plus a 76-min Q&A with the director and four mins of behind-the-scenes footage. **AVB**



Caprica: Part One

Universal Playback → R2 DVD £25 Approx



This four-disc set comprises the first nine episodes of the Battlestar Galactica prequel (with both

DVD and SyFy edits of the pilot), and it's easy to see why viewers weren't quite as enamoured. Despite excellent performances and no shortage of big ideas, the first half of *Caprica* frequently comes across as more of a sci-fi soap than its action-packed big brother. This DVD set holds its own very well with excellent anamorphic 1.78:1 transfers and crisp DD 5.1 audio. Plentiful extras include commentaries, 48 deleted scenes, 13 video blogs and three production featurettes. *AVB*



Mr Nice

E1 Entertainment → Region B BD £25 Approx



Adapted from the memoir of famed drug smuggler Howard Marks, the appeal of this

shaggy-dog story of a film entirely rests on Rhys ifans' superb central performance. It's just a shame that (despite some cheeky digital manipulation of archive footage) writer-director Bernard Rose fails to come up with a compelling narrative. The disc's AVC 1.78:1 1080p encode frequently looks very nice, although the archive film inserts drag the quality down in places, while the DTS-HD MA 5.1 mix is rather dull. Marks and Rose both get their own commentaries. **MC**



Marmaduke

20th Century Fox→ Region B/C BD £29 Approx



Despite numerous failures, Hollywood is still attempting to turn animal-related comic strips into

family-friendly flicks. Take the wit and wisdom of gangly Great Dane, Marmaduke: no matter how low your expectations are, the film is not only bad, it's also seriously lacking in ambition, never reaching beyond out-of-date slang ('cowa-barka'), fart jokes and the obligatory rendition of Who Let the Dogs Out? The AVC 2.40:1 encode is colourful and sharp and comes with a handful of child-friendly features, while a DVD and Digital Copy make up the extras. **AvB**



Hex marks the slop in the Wild West

Too much turkey at Christmas? Here's another helping for your cinema room





HCC VERDICT

Jonah Hex⇒ Warner Home Video → All-region BD → £23 Approx

We say: Gun it down at high noon

Picture: 12345 Sound: 12345 Extras: 12345

Movie: 12345

Overall: 12345

Jonah Hex might not be the most high-profile comic book character to make the leap to the big screen. But that's no excuse for the paucity of effort and imagination that was put into this cinematic turkey. Feeling like a never-ending ordeal (although running for a meagre 81 minutes including the credits), this adaptation seems less like a completed film than a hasty edit of whatever material they'd got around to shooting before someone told them it was time to wrap.

Mixing a tale of revenge with half-baked supernatural mumbo jumbo, Jonah Hex never finds its own identity. Add to this the endless cringe-worthy dialogue and a complete lack of character development, and the film becomes an incredible chore to watch. The fact that Josh Brolin is the perfect actor to play the title role and does his best with the material he's given just makes the whole thing even harder to suffer through. Chris Jenkins: For what it's worth. Jonah Hex scrubs up pretty well on Blu-ray. While there are some darker sequences that look pretty murky, for the most part Warner's VC-1 2.40:11080p encode delivers everything

you'd expect from a

modern Hollywood action film. The sunburnt colour palette is well saturated, while impressive delineation and sharpness makes the most of Hex's craggy and scared face (although Megan Fox's tart-with-aheart seems to get her own personal noise reduction to make her skin appear almost freakishly smooth).

Mark Craven: This Blu-ray release sports a truly thunderous DTS-HD MA 5.1 mix that packs an almighty bass wallop that'll have you reaching for the remote to turn down the volume on your AVR. Despite this, the dialogue is never buried in the mix and always sounds perfectly clear (even Brolin's gruff mumbling).

Less impressive, though, is the fact that the film mistakes raw power for audio excellence. So, while the mix has plenty of grunt, it has very little ambition and makes surprisingly subdued use of the surrounds.

Anton van Beek: This Blu-ray can only rustle up a rather limited batch of extras. There's a picture-in-picture track packed with behind-the-scenes footage, and director and cast interviews that rarely get beyond platitudes for each other.

The Inside Story of Jonah Hex is an all-too short 11-minute look at the comics that inspired the film. Finally, there's a reel of three dull deleted scenes. The set also includes a bonus DVD and Digital Copy of the film.



Teenage fish-food fest

Does 3D add extra bite to this bloodsoaked tale of ravenous prehistoric piranhas?

Piranha 3D is the ultimate in cinematic guilty pleasures and marks a renaissance of sorts for director Alexandre Aja after the abysmal Mirrors. The plot is so thin that it's barely worth mentioning. All that really matters is that it's Spring Break at Lake Victoria, the waters are full of barely-clothed teenagers and an underwater earthquake has unleashed a shoal of prehistoric piranhas. What follows is a perfectly playful mix of sex and violence, unleashing both by the barrel-load, while always remembering to smile at the same time. Chris Jenkins: This two-disc Blu-ray release serves up no fewer than three different viewing options. Disc One hosts an MVC 2.40:11080p 3D encode (that can also be watched as a flat AVC 2.40:11080p 2D version), while Disc Two takes a trip back in time with an AVC 2.40:11080p anaglyph 3D version.

Watched in 2D, the hi-def encode looks very pleasing. There's plenty of detail on display, while brightness and colour saturation are pushed to levels that convey the Spring Break heat. And, while blacks sometimes look a little crushed, even darker scenes hold up well for the most part with plenty of shadow detail visible.

As for the full HD 3D experience, it's a little more problematic. Unlike other converted 3D films, *Piranha 3D* was at least shot with stereoscopy in mind (the filmmakers claim that issues with reflections from the water, and the

desire to shoot in 'Scope, made using 3D cameras impossible). With this in mind, the 3D holds up very well for the most part. There's a solid sense of depth to many shots and the film gets plenty of mileage from poking things out of the screen at you.

However, on a few occasions the convergence is pushed too far (such as the opening credits) resulting in some off-putting ghosting that drops the quality down a notch. But it's still much better than the headache-inducing anaglyph version.

Mark Craven: This Blu-ray sports the kind of aggressive and immersive DTS-HD MA 5.1 track you'd expect from a film like this. Surrounds are employed extensively throughout and your subwoofer gets a thorough workout, courtesy of the underwater scenes. It can get a bit chaotic at times (especially during the big Spring Break massacre), but even here the dialogue retains excellent clarity — and some of the Foley effects are deliciously gruesome.

Anton van Beek: The sole extra on Disc One is a light-hearted commentary by Aja and his producers that mixes plenty of production details with some amusing anecdotes.

But much better is the superb 10-part, 130-minute Making of... documentary lurking on Disc Two. it's this platter where you'll also find six deleted scenes and narrated storyboards for two un-filmed sequences.





HCC VERDICT

Piranha 3D → Entertainment in Video → Region B BD £25 Approx

We say: This playful gorefest is definitely a Blu-ray worth snapping up

Picture: 12365 Sound: 12365 Extras: 12365

Overall: 12345



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There are also many new brands making their first appearance at the Showl

BRANDS INCLUDE: Acous-Tech, Acoustic Energy, Acaustic Insight, Acoustic Signature, Amphion, Analogue Productions, Analysis Audio, ANT, Anthem, Arcam, Armour Home Electranics, Astin Trew, Atacama Audia, Allos Cables, Audience, Audio Fidelity, Audio Note, Audia Technica Headphanes, Audianector, Auliuve Corporation, Aurousal, Aurum Speakers, Back to Black, BDI, BeCHOCOLATE, Bedini, Black Diamond III, Blue Horizan, Bowers and Wilkins, Bryston, Cabasse, Cantan, Castle, Chopter Audia, Chapter Electronics, Chieflox, Clossic Records, Cleardight Audia, Campulers Unlimited, Canran Audia, Cyrus, Dair, Deltec Precision Audia, Denon. Diverse Vinyl, Dynaudia, Boc, Electracomponiet, Epson, Exposure, Finders Keepers, Focal, Friday Music, Furutech, Galdring, Grado, Guerssen, Heca, Henley Designs, Hi-Fi Choice, Hi-Fi News, Hi-Fi Racks, Hi-Fi Whens, Hi-Fi R

Gore! What is it good for?

The hi-def encoding of this iconic Seventies Italian horror doesn't quite make the grade

Deep Red saw director Dario Argento pushing the thriller genre into new areas, stretching himself as both a storyteller and a visual stylist. What resulted is every bit as gorgeous as it is gruesome; a film of spellbinding beauty and staggering cruelty that's as satisfying a murder mystery as it is as an all-out horror. Chris Jenkins: Deep Red arrives on Blu-ray with a pair of initially impressive, but slightly problematic encodes. Both versions of the film are presented as AVC 2.35:11080p encodes and certainly mark a significant step-up from previous DVD releases with improved detailing and clarity, not to mention far fewer unsightly areas of artefacting and other digital blemishes. The two transfers are also extremely grainy, which does result in a loss of 🔼 fine detailing. All of which would be perfectly acceptable for a flick of this vintage, but Arrow Video reportedly had to delay the release several times due to problems sourcing suitably highquality materials, and it looks as if the company may have got around this to some degree with some digital filtering. It's certainly not ruinous, but it has resulted in a slightly processed look. Other issues include reports of a brief pixelation glitch (although this seems to be hardware dependent) and pulsing yellow levels in a handful of sequences.

Mark Craven: Plump for the Director's Cut and you get a choice of Dolby Digital 2.0 and DTS-HD MA 5.1 versions of the original italian language track, plus a DD 2.0 presentation of the English language track. The stereo mixes both sound perfectly acceptable, although it's rather disappointing that they're only included in lossy form. As for the



lossless 5.1 remix, despite a few errant surround effects, it actually holds together well, with Goblin's score

benefiting the most, it's worth noting that not all of the additional footage in the Director's Cut had an English language track made for it, so in these scenes the English DD2.0 mix switches to subtitled Italian. The Theatrical Cut only features the English DD 2.0 mix.

Anton van Beek: In addition to both the 127-min Director's Cut and 105-min Theatrical Cut, this two-disc set maintains the high standards we've come to expect from Arrow's supplementary packages. The Director's Cut is accompanied by a fascinating analytical commentary by Argento expert Thomas Rostock, interviews with Argento, actress Daria Nicolodi and composer Claudio Simonetti and two trailers. The Theatrical Cut is accompanied by a tour of the Profondo Rosso shop in Rome. The set also includes reversible sleeves and a collectible booklet.



HCC VERDICT

Deep Red Arrow Video → All-region BD £23 Approx

We say Argento's masterpiece gets a stylish HD package, but there's room for improvement

Picture: 12345 Sound: 12345 Extras: 12345 Movie: 12345

Overall: 12345

A Serbian Film

Revolver → All-region BD £20 Approx



This controversial shocker comes to the UK minus four minutes cut by the BBFC, but still

has the ability to shock audiences. This scathing political allegory is uncompromisingly horrific, full of nightmarish ideas and images you'll wish you could scrub from your brain. And it's made all the more visceral through some high production values that are evident in the disc's strong AVC 2.40:11080p encode and aggressive DTS-HD MA 5.1 mix. Extras include an intro from the director, a Q&A with the director and co-writer and an essay by film critic, Alan Jones. **AVB**



Dead Space: Aftermath

Anchor Bay→Region BBD £20 Approx



Designed to bridge the gap between the hit video game and its recent sequel, this animated feature

manages to be even worse than its predecessor *Dead Space: Downfall*. Here the focus shifts to a generic bunch of space-farers sent to investigate the events of the first game. The shifting viewpoints allow a mix of animation styles, but it's all linked together by some of the worst CG animation ever. The AVC 2.40:1 1080p encode is fairly sharp, while the Dolby TrueHD 5.1 mix is curiously lacklustre. There are no extras on the disc. *MC*



Optimum→Region B BD→£20 Approx



F is the latest in the growing British sub-genre of 'hoodie horror'. Here, a group of teachers working

after hours find themselves under attack from mysterious hooded assailants. It looks great and does an excellent job in developing convincing characters, but this sense of authenticity is spoiled by tuming the hoodies into magical bogeymen with parkour powers. Optimum's disc has a suitably dark and gritty AVC 1.78:1 1080p encode and an atmospheric DTS-HD MA 5.1 mix. in addition to a commentary, it also features a 29-min Making of ..., interview and trailer. AVB



Ip Man 2Cine-Asia→ Region B BD £25 Approx



The story of the Wing Chun grandmaster continues with this entertaining martial arts sequel, dealing

with his time in Hong Kong and bringing him into conflict with corrupt British colonials. While the story takes liberties with the facts of ip Man's life, Donnie Yen remains an electrifying screen presence, and the fight scenes are good enough to satisfy any martial arts movie buffs. Cine-Asia has also delivered an impressively detailed AVC 2.40:11080p encode and robust DTS-HD MA 5.1 audio. Great extras include a commentary by genre expert Bey Logan. **AvB**



Gainsbourg

Optimum → Region B BD £23 Approx



Eschewing the traditional biopic structure, comic book artist Joann Sfar takes a much more

fantastical and impressionistic look at the life of French provocateur musician, Serge Gainsbourg. Presented here in its shorter 122-minute cut, the film arrives on Blu-ray with a seductively rich AVC 2.40:1 encode, which revels in the film's sumptuous production design. Unsurprisingly, the DTS-HD MA 5.1 soundtrack is at its best when handling Gainsbourg's music, but still provides plenty of atmosphere elsewhere. Extras include the trailer and behind-the-scenes footage. **MC**



Certified Copy

Artificial Eye → All-region BD



This intriguing cinematic experiment from Iranian filmmaker Abbas Kiarostami, follows

an English author (William Shimell) and an unnamed woman (Juliette Binoche) as they first discuss the subject of his latest book – that copies are as good as the 'real' thing. They then drift into the sort of arguments you'd expect from a married couple. But are they really married or is the film just questioning our own relationship to artifice? The Blu-ray delivers an appealing AVC 1.85:11080p encode and subdued DTS-HD MA 5.1 audio, plus a 52-min Making of... and trailer. AVB



White Material

Artificial Eye → All-region BD



This memorable drama stars isabelle Huppert as the owner of a coffee plantation in an African nation

that has fallen into chaos. Violence erupts, but her stubborn attitude and refusal to give up her land prevents her from seeing that she's putting those around her in terrible danger. This Blu-ray release's AVC 2.35:11080p encode delivers high-quality images of sweeping African vistas as well as detailed facial close-ups. The French-language DTS-HD MA 5.1 is less immediately impressive, being clear but fairly subdued. Extras are limited to an interview and the trailer. **AVB**



Brighton Rock

Optimum→Region B BD £20 Approx



Arriving swiftly after the latest cinema adaptation of Graham Greene's novel. this Blu-ray

release of John Boulting's celebrated 1947 version has few extras, but serves up a generally pleasing digitally restored version. The AVC 1.33:1 1080 p encode displays plenty of minor print damage, but (despite some digital smoothing) delineation is by far the best the film has ever exhibited and contrast levels are spot on. The LPCM 2.0 mono mix is clear, if limited. Extras include an interview with the director of the new film and a 1954 interview with Boulting and Dicky Attenborough. **AVB**



No country for young women

If this film was British, it would have been set in Lincolnshire



HCC VERDICT

Winter's Bone → Artificial
Eye → Region B BD → £20 Approx

We say: UK buyers miss out on extras, but we still recommend snapping up this drama-thriller on BD

Overall: 1 2 3 4 5

Winter's Bone has garnered praise and awards since its release and with damn good reason. This remarkable family-drama-cum-thriller stars Jennifer Lawrence as 17-year-old Ozark Mountains' native, Ree Dolly. The sole carer for her younger siblings and her almost catatonic mother, Ree finds herself in a race against time when her father skips bail, having put their home up as the bond.

Adapted from the novel by Daniel Woodrell, Winter's Bone offers a fascinating and often harrowing glimpse into a close-knit world rarely ever featured in cinema. Replete with mesmerising performances and striking cinematography, the film's biggest trump card is director Debra Granik's refusal to fill it with hillbilly caricatures, ensuring that this 'Southern noir' boasts a convincing sense of authenticity that makes its story and characters feel all the richer.



Chris Jenkins: Bleak. That's the first world that comes to mind when watching Winter's Bone. Shot through with icy blues and chilling greys, this isn't a film you'd expect to really bring the best out of your home cinema.

And some of the interiors do seem a little flat and dull, with the occasional

bout of crushed blacks marring the visuals. But when the story movies into the great outdoors, the AVC 1.78:11080p encode comes into its own, layering the screen with exceptional detailing and a depth of field that brings to life the desolate Ozark forests.

Mark Craven: This Blu-ray's DTS-HD MA 5.1 mix is every bit as subdued as the film itself, but employing subtle ambient and atmospheric sounds across all channels helps bring the onscreen world to life in a believable fashion. With that said, there are several sequences that demand something a little more dynamic and the mix doesn't falter here either, proving that, when necessary, it can deliver a little more aggression and punch.

Anton van Beek: Sadly, while Artificial Eye's Blu-ray release scores very well on the picture and sound front, the bonus features are a let down. Most disappointing is the lack of the commentary track by director Debra Granik and director of photography Michael McDonough that appeared on the US release.

As it is, you'll just have to make do with an interesting 47-minute *Making of...* doc that crams in lots of behind-the-scenes footage; an alternate opening; a reel of four deleted scenes; the trailer and a music video for the track *Hardscrabble Elegy.* Of these, only the trailer is in hi-def.











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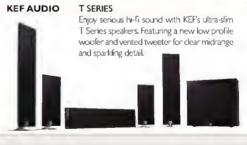
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RADIUS R90 HD10

Feedback

Got an axe to grind? Want to comment on current technology? Need to share? HCC is here to help

Format frustration

I refer to P. Aungier's letter in HCC #190 re: 4:3 pictures. i think the point being made is that Panasonic and Sony TVs do not automatically switch to 4:3 when required. It has to be done manually. This is okay for those in the know, but my 83-year-old mother with her new TV, does not want to watch 4:3 pictures in a distorted mode, and does not want to be looking for another button to press on the remote. This being the case, I'm afraid Panasonic and Sony lost out to Samsung, which does switch to 4:3 automatically.

On another matter, why don't TVs connected to a DVD player etc by HDMI cables automatically connect when the player is switched on? They always did with a Scart lead. David Simpson, Lincs

It has to be said that sometimes aspect ratio problems are the fault of the broadcasters; not all shows are flagged with the appropriate switching information. And in cases where they are, It can sometimes be more irritating than helpful; watch a 4:3 episode of Friends on E4, and your TV will constantly switch settings when the ads come on.

As for HDMI autoconnection, it's part of the spec, but indeed doesn't always work as intended.

Is plasma best for petrolheads?

I would like to replace my Sharp 37in nearly-HD Freeview flatscreen with a Panasonic 42in plasma. The main criterion will be for watching Formula One motor racing via Freeview.

Is the refresh rate the thing to look for?

If I were to choose one that has 3D features, will this detract from the performance of the set regarding motion blur? Martin Boyle, Theydon Bois

Firstly, there's no reason we can think of why having 3D capability on TV will adversely affect its 2D performance - we certainly haven't found this on any 3D screens we've tested.

As for getting a full HD 42in Panasonic plasma to replace your existing 37in 'nearly-HD' Sharp (we're not exactly sure

what that means...) good idea.



Fl - coming soon in HD



What dB setting is right for me?

I've just upgraded my old Yamaha DS-AP2 amplifier to the brand's new RX-V3067, so I could enjoy all HD sound formats via HDMI instead of using the analogue inputs.

I have found one item on the new amp slightly confusing, due to the fact that the new line of thought for displaying the volume is now in the dB scale. I am 'old school' and have grown up with the simple volume min/max volume control, so knew roughly the level of power the amplifier is at, keeping it well under its level of distortion, with plenty of power in reserve for 'dynamic' scenes.

The trouble is, after setting up the new AVR i am not sure what volume is now normal listening, as going by the dB reading the scale is now -80dB to +16dB, so I have to set the volume to

around -35dB, which seems a long way up the scale to get to 'normal' everyday listening. For movies I crank it up to around the -10dB level. This seems far higher compared to the lower-powered DS-AP2, which has added to my confusion.

What Is considered a normal dB level to listen at, without acquiring a SPL meter

to find actual real

sonic levels and comparing both amps. Or should i just use my ears and not my eyes to set volume levels? Nick. via email

There's a vast amount of confusion about the use of the dB (decibel) scale, mainly because the scale is not linear, but logarithmic; In other words, an increase of 10dB results in a doubling of loudness. Doubling the

power output of an amp leads to an increase in sound pressure level of around 3dB. At low power levels around 5W to 10W, this is practical; at higher levels, you might need to jump from 1,000W to 2.000W for the listener to be aware of an increase in sound level. The dB scale can also be used differently for amps and speakers, which adds to the confusion.

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button, choose a username and then create your profile. You can upload an image to represent you online and use your signature to tell fellow AV fans about your own system automatically every time you post. Joining the big AV debate online has never been easier!



Plasma technology usually handles motion better than LCD displays, and the built-in Freeview HD tuner means you'll be able to take advantage of the forthcoming F1 HD broadcasts.

21:9 subtitles

I really enjoyed John Archer's review of the new Philips 21:9 TV. However, it raised a couple of thoughts — what do you do with a movie that runs subtitles in the black bar if the TV expands the image to fit? And, although movies make up

However, the OdB setting is the industry 'reference level' at which sounds of all frequencies should have the same perceived loudness, so in an ideal setting this is the level at which you should run your amp. In practice, this is far too loud for the average room. You'll probably want to try levels between -10dB and -20dB.

The adoption of the dB scale on amps might cause some confusion, but it's better than manufacturers setting their own, often wildly different, scales.

Winner: Star Letter writer Nick wins a copy of The Social Network: 2-Disc Collector's Edition on Blu-ray courtesy of Sony Pictures Home Entertainment. It's available from Feb 14, priced at £25 approx. a large percentage of my viewing, so does regular TV. When watching a 16:9 transmission, could John give an approximation of the image size? Is it comparable to, say, a 46in 16:9 TV image? Phil Parry, via email

Philips has answered this one for you, Phil. Says the brand: 'This latest version of the Philips 21:9 has a choice of 10 clever picture formatting modes. These allow viewers to adjust the picture to provide the perfect image, no matter what type of content they are watching. One of these modes is 'Cinema 21:9 Subtitle' mode which adjusts the picture on the set to compensate for subtitles, meaning they are always in view.

'Along with this all of Philips range of Blu-ray players come with subtitle shift function. This function lets you manually adjust the position of the subtitles on the screen, meaning that they can be brought into the picture so are never off screen.

'A standard 16:9 image on the 21:9 TV takes up approximately the same space as a 43in-44in TV on the screen. But again, due to the picture formatting modes, should the viewer want to, the TV can adjust 16:9 images to fill the screen.'

3D conversions? Pah!

Declan (HCC #191) may agree with James Cameron about using 2D-3D conversion for classic titles such as *ET* and *Jaws*, but I don't. Why is Hollywood obsessed with reusing old films instead of making new ones? For money

only. it'd be better for us cinemagoers if directors like Cameron continued to make new films, in 3D if they want, rather than feeding us the same

LETTERS 97

movies we watched 20 years ago, only with some computerdone 3D conversion.

Robert, via email

We think this argument will rumble on...

Should I wait for a glasses-free 3DTV?

My current TV, a 40in V-series Sony, is beginning to look a little long in the tooth — it has no access to Sony's Net TV stuff (I'd quite like online LOVEFiLM access), nor is it 3D. So, I was gearing up to purchase a new set, probably another Sony, when everyone started showing glasses-free 3D screens. I know some of these are prototypes, but Toshiba has said it will have a 40in one on sale later this year.

What I want to know is: would I be making a mistake to buy a 3DTV (active or passive) that uses glasses? Alan, via email

We understand why you want to get a new screen, Alan, as the technology has moved on quite a bit since Sony's V-series Bravias came out. We should point out, though, that you don't need to get a whole new TV to get Sony's net portal — even the brand's entry-level Blu-ray players offer this service.

As for glasses-free 3D screens, our advice would not be to wait if you're interested in 3D. A lot of brands have unveiled prototypes, but that's exactly what they are — only Toshiba has made a promise to launch such a screen.

Instead, check out
Sony's new 40NX713 set. it's
3D-ready, bursting with net
interactivity and a bit of a
looker, too — we'll have full
review next issue

Write to Letters, Home Cinema Choice, Future Publishing, 2 Balcombe Street, London NWI 6NW, or email us at hcc@futurenet.co.uk Due to the volume of letters we receive we cannot guarantee to print/answer them all.

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How we test

Home Cinema Choice's hardware reviews combine the subjective opinion of our seasoned reviewers with hard technical data.

Chris Jenkins explains how the HCC Tech Labs work

hardware reviews combine the opinions of our experienced reviewers with objective technical data from our test lab. Here's how we do it...

HCC's gear reviews have a long tradition of combining the subjective opinions of experienced reviewers with hard scientific data from our test labs. That way, you can be sure that there's no danger of favouritism or prejudice creeping into the reviews – when we combine the reviewer's opinions with the test data, we can be sure that the results we present to you, the readers, are honest, reliable and accurate.

For over 20 years, we have been developing testing methods for every AV technology from CRT TV and VCRs to the latest 3D flatscreens, multichannel amplifiers and media players. Our testers have been trained by the ISF, Tektronix, Home Acoustic Alliance and other industry bodies, and we use industry-standard testing equipment so we can be confident our results make sense in terms of manufacturers' claims.

Our Tech Labs set-up consists of two main facilities.

The Viewing Room

Used mainly for testing TVs, projectors and speakers, the Viewing Room is designed to reproduce the conditions found in a typical mid-range home cinema installation. Created by award-winning custom installers Pounds (www.poundstv.co.uk), it's completely light-proofed for testing of TVs and projectors, is partially soundproofed using Acoustiblok (www.acoustiblok.com), and has been acoustically treated and tuned using custom absorbers and diffusers by the experts at RPG (www.rpg-europe.co.uk).

The room has a resident Crystal Acoustics TX-T2 7.2 speaker system and a Screen Research 100in projection

screen. TVs, projectors and amplifiers are moved in as needed for testing. We use a TV stand from Gecko (www.gecko-furniture.co.uk) for mounting flatscreens. The room is fully cabled with speaker, HDMI, and interconnects from Peerless. Multiple displays can be fed from the same source using a Gefen 2-in-4-out HDMI switcher/splitter, and the room is also equipped with network connections.

The testing equipment used for TVs and projectors is the Chroma5Pro meter and ChromaPure Pro software supplied by Kalibrate Ltd (www.kalibrate.co.uk).

This sophisticated tristimulus colorimeter and analysis software allows us to measure functions such as contrast ratio, colour temperature and luminance, all essentials in picture performance.

The Test Lab

Mainly used for performance analysis of amplifiers and players, the Test Lab is equipped with an Audio Precision APX585 multichannel analyser. This generates programmable test signals, and runs a huge range of tests of functions such as output power, frequency response and distortion. It also has digital audio test functions. A Tektronix VM700 is used for analysis of analogue video signals.

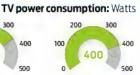
Cables for the test system are again from Peerless. In addition to the main test units, we use a number of audio and video signal generators from Sencore and Snell & Wilcox, analogue test equipment such as a oscilloscope, mains power meters from Maplin, a library of test and measurement DVDs and Blu-rays (plus all the newest software releases), and standardised digital files for media players.

For testing of media software and portable testing

Tech Lab tests explained



White screen: This is a measurement of a display's power consumption in Watts when displaying a pure white 100iRE signal with muted audio



Test footage: Here the power consumption is measured with a looped test sequence of live footage (complete with explosions!) and the audio volume up

TV contrast: ratio Claimed 10,000:1 Actual 450:1

Picture: Contrast ratio claims by TV manufacturers are often extravagant, and don't follow an established standard. Our real-world measurements cut through the hype and allow one brand's contrast to be compared with another in a consistent way

Colour temp: Kelvin



Presets: Most TVs default to a picture setting, which is too bright and 'hot' (blue), in order to make them look good in shops, but also have a choice of colour temperature presets. We tell you which of these gets closest to the industry standard setting of 6.500K (D65)

Blu-ray/DVD power consumption: Watts



regulation, standby power consumption for most devices is now under IW, so we don't usually measure this; but the consumption when power is on can be considerably higher, so we measure this for DVD and Blu-ray players and some other devices



Playing: When a disc is spinning, the device's power consumption usuallyrises, so we measure when playing a standard disc. In theory, media players should display no change in consumption when playing

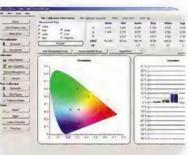
Audio Jitter: Ps



Sound: The analogue audio jitter from a device such as a Blu-ray player is measured in picoseconds. The lower the number, the better. Though analogue audio output is perhaps rarely used, jitter is often a good indicator of the general build and component quality of many devices







Test bench: The Viewing Room (above) simulates a typical home cinema, while the MSI laptop runs test software for the APX585 analyser (right) and ChromaPure system (above right)





applications, we use an MSI GT640 laptop PC with HDMI output and SRS sound.

Results

All this testing generates a huge mount of data, which is fed into the product reviews and stored on our database. From this we can establish performance averages which help us to keep our scoring realistic.

Of course, this mass of information is too unwieldy and detailed to publish in the magazine unedited, so our next job is to present it in a way which is meaningful and easy to understand. Our graphical presentations (see below) should make it all more digestible. So, while one key reviewer is normally by-lined for our tests, the whole team will have been involved in bringing you results you can rely on •

Video Jitter: Ns



Vision: Again, the analogue video jitter of a DVD or BD player may be less relevant when the digital output is normally used, but it is a good indicator of general build and component quality. We also measure other video quality indicators such as chroma crosstalk and frequency response at 5.8MHz

Loading: Boot/Java



Disc loading & Java: Blu-ray disc players can be annoyingly slow to load and play discs, thanks mainly to the DRM and Java content. We measure times from power on to tray opening, and tray in to boot menu on a standard BD disc

AVR power: Watts



Powered: Power consumption of an AV amp can be high, but it's a requirement of decent output levels. We measure consumption in two states, when idle, and when loaded with a multichannel surround system

Amp output power: Watts (8 Ω , 0.5% THD)



2-channel 8Ω:
Manufacturers' claims
for amplifier output
power can be wildly
exaggerated, and
testing standards vary
widely. Our tests deliver
a figure for stereo
performance with an
8Ω load, and quote a
Total Harmonic
Distortion result

150 200 50 70 250 300

5-channel 8Ω: In most cases, multichannel performance will not match up to the two-channel figure. We push the products to its limit in multi-channel mode and quote the figure reached before unacceptable distortion results

Pure power: Watts



Fidelity firewall: This is our way of measuring an amp's output power ability before it is tainted by distortion. We measure at IKH2 with an 8Ω load to 0.05% THD to get an indication both of output power and component quality

Signal/noise: dB



S/N tests: These amp measurements reveal the ratio of signal to noise at a specific frequency. Low, mid and high readings are taken to determine the imaging and sonic character of the amp

Looking to buy a new television?

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LCD TV

Best on test...



46in → 46PFL9705H £2,500 Approx









Philips' debut 3DTV is worthy of Its £2,500 ticket

Highs: Excelient 3D and 2D Images; solid audio; interactive functions

Lows: No Freeview HD tuner

→ Specifications HD Ready: Yes (to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 2 (2 RGB) No. of component inputs: 1 PC input: 1 Digital tuner: Yes, Freeview

Tested: issue 189 For more info visit: www.philips.co.uk



60in → KDL-60LX903 £3,500 Approx





Flagship 3D set from Sony is a

real bigscreen beauty Highs: Integrated 3D; intuitive GUI; cinematic HD pictures Lows: Weak audio; 2D-3D

quality is source-dependent

→ Specifications Full HD: Yes (to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 1 (RGB) No. of component inputs: 1 PC Input: 1 Digital tuner: Yes, Freeview HD

Tested: Issue 186 For more info visit: www.sonv.co.uk



58in → 58PFL9955H £4,000 Approx







The CinemaScope TV returns with 3D and LED backlighting

Highs: Ultra-wide form; 'net connectivity; picture performance Lows: No HD tuner

→ Specifications Full HD: Yes (to 1080p) 2,560 x 1,080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 2 (1 RGB) No. of component inputs: 1 PC input: Via HDMi only Digital tuner: Yes, Freeview

Tested: Issue 190 For more info visit: www.philips.co.uk



47in → 47LE8900 £2,100 Approx









Fuil LED-backlit LCD with LG's NetCast feature and THX cred

Highs: Smart fascia and interface; good colours and contrast; great calibration tools Lows: Limited web content

Specifications Full HD: Yes (to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 1 (RGB) No. of component inputs: 1 PC input: 1 Digital tuner. Yes, Freeview HD

Tested: Issue 184 For more info visit: www.lge.com/uk



SHARP 46in → LC-46LE821E £2,000 Approx







Quad Pixel edge-lit LED TV with Innovative in-built Flash PVR

Highs: Amazing levels of fine detail; great colour fidelity; useful Time Shift function Lows: No video streaming

Specifications Full HD: Yes (to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 1 (RGB) No. of component inputs: 1 PCinput:1 Digital tuner. Yes, Freeview HD

Tested: Issue 182 For more info visit: www.sharp.co.uk

Also recommended



TOSHIBA 55in → 55WL768 £1,800 Approx









Designer 55in 3D screen from Toshiba is worth a look

Highs: HD images; Resolution+ upscaling; full-bodied audio; Jacob Jensen styling Lows: Crosstalk with 3D

→ Specifications Fuil HD: Yes (to 1080p) 1920 x 1080 resolution No. of HDMi inputs: 4 No. of Scart inputs: 1 (RGB) No. of component inputs: 2 PC input: 1 Digital tuner: Freeview HD

Tested: Issue 191 For more info visit: www.toshiba.co.uk



SAMSUNG 46in → LE46C750 £1,500 Approx







3D for all. Affordable active shutter set with CCFL backlight

Highs: Good 2D performance and effective 2D-3D conversion Lows: Crosstalk problems and narrow viewing angle

Specifications Full HD: Yes (to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 2 (1 RGB) No. of component Inputs: 1 Digital tuner: Freeview HD

Tested: Issue 187 For more info visit: www.samsung.co.uk



SONY 32in → NX503 £650 Approx







32in net TV set perfect for second-room use

Highs: Online talents; neat design; excellent contrast and HD detailing Lows: Traces of motion blur

Specifications

Full HD: Yes (to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 2 (2 RGB) No. of component inputs: 1 PC input: 1 Digital tuner: Freeview HD

Tested: Issue 188 For more info visit: www.sony.co.uk

Editor's Choice...

SAMSUNG

55in UE55C9000 £7,000 Approx

2345

as the crowning glory of Samsung's TV design and technology divisions.



it's an extraordinary product, which warrants its iofty position in the range, and is a great example of just how accomplished an LCD can be – none of Samsung's rivals have a comparable 'statement' product. As a feature-packed set that offers such goodles as 3D, 2D-3D conversion, internet@TV and media streaming, it represents the leading edge in functionality and the picture quality is exquisite.

Specifications



Plasma TV

Best on test...



60in → KRP-600A £5,000 Approx



Kuro with separate media box, Ethernet and satellite tuner

Highs: Awesome black levels; colour accuracy; slim panel; media-savvy Lows: Problems with AVI files

→ Specifications

Full HD: Yes (up to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 3 (2 RGB) No. of component inputs: 1 PC Input: Yes Digital tuner: Yes and DVB-S2 tuner

Tested: Issue 164 For more info visit: www.pioneer.co.uk



65in → TX-P65VT20 £4,500 Approx



The biggest 3D TV currently available is worth the high ticket

Highs: High-impact bigscreen pictures; minimal crosstalk with 3D images Lows: Sucks electricity

→ Specifications

Full HD: Yes (up to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 2 (RGB) No. of component inputs: 1 PC Input: Yes Digital tuner: Yes, Freeview HD and Freesat HD

Tested: Issue 186 For more info visit: www.panasonic.co.uk



46in → TX-P46Z1 £4,300 Approx



THX-certified, ultra thin PDP with wireless transmission

Highs: Stunning HD and SD pictures; gorgeous design; good features set Lows: Premium price point

Specifications

Full HD: Yes (up to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 2 (RGB) No. of component inputs: 1 PC input: Yes Digital tuner: Yes and Freesat HD

Tested: Issue 172 For more Info visit: www.panasonic.co.uk



50in → TX-P50G20 £1,500 Approx



Freeview HD and Freesat HD plasma is the FTA king

Highs: Performance; price; Freesat/Freeview HD tuners; Lows: USB recording mode comes with strings attached

Specifications

Full HD: Yes (up to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 4 No. of Scart inputs: 2 (RGB) No. of component inputs: 1 PC input: Yes Digital tuner: Yes, Freeview HD and Freesat HD

Tested: issue 182 For more info visit: www.pioneer.co.uk



SAMSUNG

50in → PS50C6900 £1,300 Approx









Highs: Picture performance calibration tools; media functionality; value for money Lows: Screen is quite reflective

Specifications

Full HD: Yes 1920 x 1080 resolution No. of HDMi inputs: 4 No. of Scart inputs: 1 (1 RGB) No. of component inputs: 1 PCinput: 1 Digital tuner: Yes, Freeview HD

Tested: issue 101 For more Info visit: www.samsung.co.uk

Also recommended



32in -> 32PG6000 £500 Approx



World's smallest 32in plasma challenges LCD rivals

Highs: Smooth movement; good blacks and connectivity Lows: Lack of detail; some jagged edges; average audio

→ Specifications Full HD: No

1024 x 720 resolution No. of HDMI inputs: 4 No. of Scart inputs: 2 (1 RGB) No. of component inputs: 1 PC input: Yes Digital tuner: Yes

Tested: issue 162 For more Info visit: www.lge.com/uk



PANASONIC 42in → TX-P42G15

£850 Approx







Freesat HD NeoPDP at an enticing price

Highs: Wide viewing angle; excellent HD pics Lows: Lacks brightness; three HDMIs only

Specifications

Full HD: Yes 1920 x 1080 resolution No. of HDMI inputs: 3 No. of Scart inputs: 2 (2 RGB) No. of component inputs: 1 PC input: Yes Digital tuner: Yes and Freesat HD

Tested: Issue 180 For more info visit: www.panasonic.co.uk



SAMSUNG

50in → PS50A556 £1.000 Approx







Bargain-priced monster screen with a few caveats

Highs: Superb specification; great build quality; sharp detail Lows: Some motion artefacts and noise visible

Specifications

Full HD: Yes (up to 1080p) 1920 x 1080 resolution No. of HDMI inputs: 3 No. of Scart inputs: 2 (1 RGB) No. of component inputs: 1 PC input: Yes Digital tuner: Yes

Tested: Issue 161 For more info visit: www.samsung.co.uk

Editor's Choice...

PANASONIC 50ln | 7 - 250\ £2,000 Approx

2345

Panasonic's first

going to get the AV juices running, and this 50in plasma doesn't disappoint. 3D Biu-ray material comes over sharp, smooth and crosstalk-free, while Sky's half-resolution 3D preview channel is revelatory, with sports coverage in particular showing excellent depth and detail. Other highlights of this surprisingly affordable 3D set include the two pairs of supplied eyewear, class-leading 2D hi-def

picture performance, and savvy networking skills.

Tested: Sue 83

Specifications

Blu-ray players

Best on test...



Blu-ray → DVD-A1UD £4,500 Approx



Reference universal Blu-ray player that sets new standards

Highs: Stunning lifelike picture; genuine hi-fi sound; awesome DVD upscaling Lows: Complex to set up: not for those on a budget!

→ Specifications

Blu-ray profile: 2.D DVD upscaling: Up to 1D8Dp Multichannel phono out: Yes (7.1) Onboard Doiby TrueHD/DTS-HD MA decoding: Yes/Yes
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes DVD-A/SACD playback: Yes/Yes Networkability: Ethernet

Tested: issue 178 For more info visit: www.denon.co.uk

SAMSUNG Blu-ray → BD-C6900



Early adopters will love this 3D Blu-ray player

Highs: 3D compatibility; video quality: USB file support Lows: v1.4 HDMI output means hookup to oider AVRs will be via 71 outputs

→ Specifications

Blu-ray profile: 2.D DVD upscaling: Up to 1D80p Multichannel phono out: Yes (7.1) Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes DVD-A/SACD playback: No/No Networkability: Ethernet: wi-fi*LISB

Tested: Issue 181 For more info visit: www.samsung.co.uk



Blu-ray → BDP-S570

3D Blu-ray spinner is packed with features

Highs: SACD playback; BBC iPlayer onboard Lows: No multichannel phono outputs means you'll need a v1.4 AVR for 3D lossless audio

Specifications

Blu-ray profile: 2.D DVD upscaling: Up to 1D8Dp Multichannel phono out: No (stereo only) Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes DVD-A/SACD playback: Yes/No Networkability: Ethernet; wi-fi, USB, iPlayer, LOVEFiLM

Tested: Issue 185 For more info visit: www.sony.co.uk

Blu-ray → BD570 £200 Approx



LG's new deck is an ideal media player-come-BD deck

Highs: Media streaming and networking; disc loading speed; integrated wi-fi Lows: No internal memory for BD-Live; Ui has inconsistencies

Specifications

Blu-ray profile: 2.D DVD upscaling: Up to 1D8Dp Multichannel phono out: No (stereo only)) Onboard Doiby TrueHD/DTS-HD MA decoding: Yes/Yes
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes DVD-A/SACD playback: No/No Networkability: Ethernet: wi-fi: USB

Tested: Issue 186 For more info visit: www.ige.com/uk



PANASONIC

Blu-ray → DMP-BDT300 £400 Approx



3D BD deck to work in tandem with the brand's 3D plasmas

Highs: Solid AV performance: 3D material is sharp. smooth and involving: twin HDMi outputs Lows: wi-fi is by dongle only

Specifications

Blu-ray profile: 2.D DVD upscaling: Up to 1D8Dp Multichannel phono out: Yes (7.1) Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes Doiby TrueHD/DTS-HD MA bitstream output: Yes/Yes DVD-A/SACD playback: No/No Networkability: Ethernet: optional wi-fi dongle: USB: SD slot

Tested: issue 183 For more info visit: www.panasonic.co.uk

Editor's Choice...

u-ray BDP-S370 £150 Approx

12345



The first of Sony's 2010 Blu-ray players to come through the HCC Tech Labs has left us dying to see the higher-end models. This entry-level £150 machine is an absolute AV bargain, blowing its sub-£200 rivals out of the water thanks to its superb XMB control Interface, BBC iPlayer and LOVEFILM online access, Super Audio CD playback and, of course, quality HD video and audio performance. More proof that the Big S's Blu-ray focus is more than just the PS3.

Tested: 184
For more info visit: www.sony.co.uk

Specifications

Blu-ray profile 2.0
DVD upscaling: Up to 1080p
Multichannel phono out: No (stereo only)
Onboard Dolby TrueHD/DTS HD-MA decoding: Yes/Yes
Dolby TrueHD/DTS-HD MA bitstream output Yes/Yes
DVD-A/SACD playback: No/Yes
Networkability: Ethernet; Wi-Fi; 2 x USB; Bravia Internet Video
BBC iPlayer, LOVEFiLM, YouTube, etc

Also recommended



Blu-ray → BDP-83SE Nu-Force Edition £1,300 Approx





Buffed-up Oppo BDP-83 is perfect for audiophiles

Highs: Excellent HD image quality; terrific build and sonics Lows: Lacklustre online content portal

Specifications

Blu-ray profile: 2.0 DVD upscaling: Up to 1D8Dp Multichannel phono out: Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes DVD-A/SACD playback: Networkability: Ethernet; online portal; USB

Tested: Issue 19D For more info visit: www.hlaudio.co.uk







New top-of-the line deck until the 3D player arrives...

Highs: Overall picture and sound performance; 'Tube' sound emulator for CDs Lows: Somewhat sluggish menus; wi-fi via dongle only

→ Specifications

Blu-ray profile, 2.D DVD upscaling: Up to 1D8Dp Multichannel phono out: Onboard Doiby TrueHD/DTS-HD MA decoding: Yes/Yes Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes DVD-A/SACD playback: No/No Networkability: Ethernet; wi-fi via dongle; SD card slot; 2 x USR

Tested: Issue 180 For more info visit: www.panasonic.co.uk



Blu-ray → Azur 650BD £400 Approx



AUDIO

First deck from UK brand is a solid performer - and multiregion DVD, too

Highs: Bulletproof build; excellent AV performance Lows: No 'net features

Specifications

Blu-ray profile: 2.D DVD upscaling: Up to 1080p Multichannel phono out: Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes DVD-A/SACD playback: Yes/Yes Networkability: Ethernet for BD-Live; 2 x USB

Tested: issue 184 For more info visit: www.cambridgeaudio.com



Recorders

Best on test...



PHILIPS

Freeview HD PVR → HDT 8520 £250 Approx





Sets a high standard for user-friendliness

Highs: Good quality HD and SD pics; cutting-edge looks Lows: No multimedia functions; EPG can be frustrating

→ Specifications

HDD size: 500GB Twin tuners: Yes. Freeview HD HDMI: Yes, with 1080p upscaling Component output: No

Tested: Issue 185 For more info visit: www.philips.co.uk



HIIMAX

Freeview HD PVR → HDR-FOX T2 £330 Approx





The pick of the new Freeview HD PVRs so far

Highs: Joy to use; multimedia talent; great performance Lows: Cramped remote control; can't trim recordings

Specifications

HDD size: 500GB Twin tuners: Yes. Freeview HD HDMi: Yes, with 1080p upscaling Component output: No

Tested: Issue 187 For more info visit: www.humaxdigital.com/uk



Freeview HD PVR → HDFV £150 Approx



Affordable Freeview HD PVR with external USB recording

Highs: Quality HD and upscaled SD performance; friendly user interface Lows: USB files can't be played back elsewhere; single tuner

Specifications

HDD size: N/A - records to Twin tuners: No. single Freeview HD tuner HDMI: Yes, with 1080p upscaling Component output: No

Tested: Issue 188 For more Info visit: www.technisat.co.uk



DIGITALSTREAM

Freeview HD PVR -DHR8203U £300 Approx



Versatile Freeview HD PVR from little-known Korean brand

Highs: Build quality; user interface: CI slot: plays JPEGs and MPEGs Lows: Below-par SD pics

Specifications

HDD size: 500GB Twin tuners: Yes. Freeview HD HDMI: Yes, with 1080p upscaling Component output: No

Tested: Issue 185 For more info visit: www.dstreamtech.com



GRIINDIG

Freesat PVR → GUFSDTR500HD £280 Approx





capacious 500GB HDD

Highs: Easy to use; coolrunning; efficient upscaling of non-HD channels Lows: USB port is disabled

Specifications

HDD size: 500GB Twin tuners: Yes, Freesat HD HDMI: Yes Component output: No

Tested: Issue 182 For more info visit: www.grundig.co.uk

Also recommended



TVONICS

PVR → DTR-HD500 £250 Approx









Highs: Commendable picture quality; neat design; twin HDMI

Lows: USB ports are for JPEG display and service updates only

→ Specifications

HDD size: 500GB Twin tuners: Yes, Freevlew HD HDMI: Yes, 2-in, 1-out with 1080p upscaling Component output: No

Tested: Issue 191 For more Info visit: www.tvonics.com



DVDR → DMR-EX773 £300 Approx







DVD/HDD recorder that misses out on Freeview HD

Highs: Solid AV performance: heaps of features and recording flexibility Lows: No infra-red control over STB; single Freeview tuner only

→ Specifications

HDD size: 160GB Twin tuners: No, single digital only HDMI: Yes Component output: Yes Camcorder input: No – USB/ SD via USB instead Format: -R/RW, +R/RW, Dual-layer recording: Yes

Tested: issue 182 For more info visit: www.panasonic.co.uk



SAGEMCOM

Freeview HD PVR → RT190-320 T2 HD £250 Approx









Highs: Good quality HD and SD pics; picture window in EPG Lows: Antediluvian UI; sluggish menu system; ugly LED display

→ Specifications

HDD size: 320GB Twin tuners: Yes, Freeview HD HDMI; Yes, with 1080p upscaling Component output: No

Tested: issue 185 For more info visit: www.sagemcomdigital.co.uk

Editor's Choice...

PANASONIC

FW880 - £800 Approx

2345



Panasonic has followed last year's award-winning twin Freesat HD/Blu-ray recorder with this Freeview HD model. Again sporting a 500GB HDD, Profile 2.0 Biu-ray player/recorder and Viera Cast online interactivity, this deck solidifies Panasonic's status as the kings of convergence. Blu-ray playback is first-rate, and as a PVR the BW880 is unique in its flexibility. Other goodles, including Gracenote compatibility, DLNA certification, DV, SD and USB inputs add to its appeal. Not cheap, but true quality often isn't.

Specifications

Twin Tuners. Yes 2 x Freeview HD Component output; No Format: BD-RE, BD-R, DVD-R/RW, +R/RW, -RAM Dual-layer recording: Yes

AV receivers

Best on test...



AVR → TX-SR608 £450 Approx



The 3D-capable AVR delivers great value for money

Highs: Appealing price tag: big, fast, dynamic sound; solid video scaling Lows: No networking or USB

functionality; uninspiring build

→ Specifications

Power: 7 x 160W (6Ω) Upscaling via HDMI: Yes Tuner: Yes (AM/FM) Dolby TrueHD: Yes DTS-HD: Yes Zone 2: Yes Serial port control: No THX certification: Select2 Plus Component input: 2 HDMI: 6-in, 1-out (v1.4a) Multichannel input: No

Tested: Issue 184 For more info visit: www.eu.onkvo.com



AVR → SR7005 £1,400 Approx



Marantz finally shakes off its 2-channel bias with this stonking multichannel marvel

Highs: Effortlessly achieves superb detail; great value Lows: Lacks 9-ch output; not THX rated; tricky to set LFE

Specifications

Power: 7 x 125W (8Ω) Upscaling via HDMI: Yes Tuner: Yes (AM/FM/net) Dolby TrueHD: Yes DTS-HD: Yes Zone 2: Yes Serial port control: Yes THX certification: No Component input: 4 HDMI: 6-in, 2-out (v1.4a) Multichannel input: Yes (7.1)

Tested: Issue 187 For more info visit: www.marantz.co.uk

L c



AVR → TX-NR5008 £2,400 Approx



New flagship receiver exhibits a smoother, mellower sound

Highs: Extensive codec support; ample connectivity. power on tap: network audio Lows: Navigation could be more intuitive

Specifications

Power: $9 \times 140W$ (6Ω) Upscaling via HDMI: Yes Tuner: Yes (AM/FM/net) Dolby TrueHD: Yes DTS-HD: Yes Zone 2: Yes, and 3 Serial port control: Yes THX certification: Ultra 2 Component input: 3 HDMI: 8-in, 2-out (vl.4a) Multichannel input: Yes (7.1)

Tested: Issue 191 For more info visit: www.eu.onkvo.com



Amp/Processor PR-SC5500/PA-MC5500



Onkvo's separates system. delivers on all AV fronts

Highs: Massive power reserves; smooth AV performance Lows: Sizable and weighty

→ Specifications

Power: $9 \times 220W$ (6Ω) Upscaling via HDMi; Yes Tuner: (Yes FM/AM/net)
Dolby TrueHD/DTS-HD: Yes Zone 2: Yes, and 3 Serial port control: Yes THX certification: Ultra2 Plus Component input: 3 HDMI: 8-in. 2-out (vl.3) Multichannel input: Yes (7.1)

Tested: Issue 187 For more info visit: www.eu.onkvo.com



AVR → SC-LX83 £2,000 Approx



Pioneer's top-flight AVR mixes power, control and usabilty

Highs: Punchy, detailed, expansive sound: iControl app is superb: MCACC setup; RF remote handset Lows: Seven-channel only

→ **Specifications**Power: 7 x 190W (8Ω)
Upscaling via HDMI: Yes Tuner: Yes (AM/FM)
Dolby TrueHD: Yes DTS-HD: Yes Zone 2: Yes, and 3 Serial port control: Yes THX certification: Yes, Ultra2 Plus Component input: 3 HDMI: 6-in, 2-out Multichannel input: Yes (7.1)

Tested: Issue 186 For more info visit: www.pioneer.co.uk

Editor's Choice...

AVR AVR-48 £2.800 Approx



Denon's AVR-4810 is the current king of the new breed of receivers that make all sorts of speaker configurations possible. Thanks to Audyssey DSX and Dolby Pro-Logic ilz processing, it's capable of driving an 11.3-channel system (with the ald of an extra stereo amp), and it'll have you re-arranging your speakers in no time. Beyond this mastery of new formats, the AVR-4810 delivers a rich, powerful sound and a full sulte of features from Net radio and Integrated wi-fi to a wide choice of Inputs and four-zone multiroom. Brilliant.

For more info visit; www.denon.co.uk

Specifications

Tuner: AM/FM/Net
Dolby TrueHD/DTS-HD: Yes/Yes
Zone 2: Yes and 3 & 4
Serial port control: Yes, 2
THX certification: No
Component Input: 3
HDMI: 6-in, 2-out (v1.3)
Multichannel input: Yes (7.1)

Also recommended



AVR → STR-DH810 £300 Approx





Feature-packed HDMI v1.4 AVR at a bargain price

Highs: Value for money: Dolby Pro-Logic IIz, immersive and realistic soundstage Lows: Not great at high volumes; limited in power

→ Specifications

Power: $7 \times 100 \text{W} (8\Omega)$ Upscaling via HDMI: Yes Tuner: Yes (AM/FM) Dolby TrueHD: Yes DTS-HD: Yes Zone 2: No, unless you use S-Air wireless speakers Serial port control: No THX certification: No Component input: 3 HDMI: 4-in, 1-out (v1.4) Multichannel input: No

Tested: Issue 186 For more info visit: www.sony.co.uk



AVR → AVR-2311 £800 Approx



MId-range Denon sounds good but is feature-lite

Highs: Articulate, fast-paced sound; digital iPod/iPad connection Lows: Lack of networking is odd; no multichannel inputs

→ Specifications

Power: $7 \times 135W$ (8Ω) Upscaling via HDMI: Yes Tuner: Yes (AM/FM) Dolby TrueHD DTS-HD; Yes Zone 2: Yes Serial port control: Yes THX certification: No Component input: 2 HDMI: 6-in, 1-out (v1.4) Multichannel input: No

Tested: Issue 190 For more info visit: www.denon.co.uk



AVR → VSX-520 £300 Approx



Affordable but stylish 3D-capable AVR

Highs: Classy design; decent sound quality; good feature

Lows: Springclip speaker terminals: no OSD

• Specifications

Power: 5 x 130W (8\Omega)
Upscaling via HDM: Yes
Tuner: Yes (AM/FM)
Dolby TrueHD: Yes
DTS-HD: Yes
Zone 2: No Serial port control: No THX certification: No Component input: 2 HDMI: 3-in, 1-out (v1.4) Multichannel input: No

Tested: Issue 191 For more info visit: www.pioneer.co.uk



Projectors

Best on test...



DLP → ScreenPlay SP8602 £3,000 Approx



New-look DLP projector from a much-revered brand

Highs: Excellent picture quality; good range of adjustments; different 'skins' Lows: Not as flexible to set up as some; slightly noisy runner

Specifications

1920 x 1080 resolution HDMI inputs: 2 Component inputs: 3 D-Sub: Yes Brightness (claimed): 1,300 **ANSI Lumens** Contrast (claimed): 5,000:1 Lamp life (claimed): 2.500hrs Fan noise: NA 24fns: Yes

Tested: Issue 182 For more info visit: www.infocus.com



DLP → MICO 40 £11,00 Approx



SIM2's 'affordable' LED projector claims a 30,000-hour lamp life

Highs: Richly coloured, sharp pictures; nicely designed chassis: enormous setup flexibility Lows: Bland remote and OS

Specifications

1920 x 1080 resolution HDMI inputs: 2 Component inputs: 1 D-Sub: Yes Brightness (claimed): 700 ANSI lumens Contrast (claimed): 50,000:1 Lamp life (claimed): 30.000hrs Fan noise: 25dB 24fps: Yes

Tested: Issue 189 For more info visit: www.sim2.co.uk



DLP → LS-5 £7,500 Approx



High-end Cl projection for the mass market

Highs: Excellent contrast and colour response; superbly sharp lmages; minimal rainbow effect Lows: Noisy runner

Specifications

1920 x 1080 resolution HDMI inputs: 2 Component Inputs: 2 D-Sub: Yes Brightness (claimed): 800 ANSI lumens Contrast (claimed): 15,000:1 Lamp life (claimed): 2,000 to 4.000hrs Fan noise: 30dB 24fns: Yes

Tested: Issue 187 For more Info visit: www.pulsemarketing.org



LCD → EH-TW5500 £4,000 Approx







Epson's flagship home cinema projector does LCD proud

Highs: Lots of features; easy and flexible to setup; produces the finest LCD plctures vet Lows: More expensive than rivals; can lose focus a little

Specifications

1920 x 1080 resolution HDMI inputs: 2 Component Inputs: 1 D-Sub: Yes Brightness (claimed): 1,600 ANSI Lumens Contrast (claimed) 200.000:1 Lamp life (claimed): 4.000hrs Fan noise: 22dB 24fps: Yes

Tested: Issue 181 For more info visit: www.epson.co.uk



SXRD → VPL-HW20 £2,400 Approx







New mid-range model from Sony delivers the goods

Highs: Design; excellent picture quality; good value Lows: Adjustment tools aren't standard: no 12V trigger

Specifications

1920 x 1080 resolution HDMI Inputs: 2 Component inputs: 1 D-Sub: Yes Brightness (claimed): 1,300 ANSI lumens Contrast (claimed): 80,000:1 Lamp life (claimed): 6.000hrs Fan noise: 20dB 24fps: Yes

Tested: Issue 190 For more info visit: www.sonv.co.uk

Also recommended...



BENQ DLP→W1000 £1,000 Approx



A £1K full HD projector with good colour presets

Highs: Very sharp HD pictures: alluring tactile finish; plenty of fine-tuning options Lows: Rainbow effect: noticeable fan noise

→ Specifications

1920 x 1080 resolution HDMI inputs: 2 Component inputs: 1 D-Sub: Yes Brightness (claimed): 2,000 ANSI lumens Contrast (claimed): 3,000:1 Lamp life (claimed): 4,000hrs Fan noise: 27dB 24fps: Yes

Tested: Issue 179 For more Info visit: beng.co.uk



DLP → H1085 £1,000 Approx









A brilliant full HD projector at a mouth-watering price

Highs: Rich colours: excellent Image tweaks: 12V trigger Lows: Noisy runner in high brightness mode; some lowlevel noise in darker scenes

Specifications

1920 x 1080 resolution HDMI inputs: 2 Component inputs: 1 D-Sub: Yes Brightness (claimed): 2,000 ANSI lumens Contrast (claimed): 5,000:1 Lamp life (claimed): 4,000hrs Fan noise: 26dB 24fps: Yes

Tested: Issue 179 For more Info visit: www.vivitekcorp.com



LCD → PT-AE4000 £2,500 Approx









Updated flagship PJ adds red-rich lamp and 12V trigger

Highs: Smooth filmic pictures: easy to setup and use; handy feature set

Lows: Boxy design; be careful with high frame-rate settings

→ Specifications

1920 x 1080 resolution HDM/Inputs: 2 Component inputs: 1 D-Sub: Yes Brightness (claimed): 1,600 ANSI lumens Contrast (claimed): 100,000:1 Lamp life (claimed): 2,000 hours Fan noise: 22dB 24fps: Yes

Tested: Issue 177 For more info visit: www.panasonic.co.uk

Editor's Choice...

D-ILA HD950 £6,000 Approx







Put simply, JVC's video-chucker is capable of an awe-inspiring performance. Spin up a Blu-ray and you'll be rewarded with three-dimensional, naturallooking pictures that are packed with detail, shadow subtlety and vibrant colours. Setting up the HD950 is made easy by its fully-motorised optical adjustments, and a THX-certified colour preset for those not wanting to get their hands dirty in its extensive calibration menus. It's an almost silent runner, too.
The best PJ we've yet seen at this price point – and
the recent HD990 upgrade improves on it even more!

Tested: iue 79 For more info visit: www.jvc.co.uk

Specifications

Speaker systems

Best on test...



5.1 → Platinum PL200AV £11,500 Approx



Gorgeous-looking, hi-tech 5.1 system for serious cinema

Highs: Dynamic, engaging sound with pin-sharp detail; taut, powerful bass; excellent build

Lows: Base plinths seem to belong to another design

→ Specifications

Power handling: 2 x 250W, 2 x 120W, 1 x 100W Rears: Direct radiating Subwoofer: 1 x 1,000W Finish: Gloss; Bookshelf: No

Tested: Issue 184 For more info visit: www.monitoraudio.com



CRYSTAL

5.1 → TX-T2-12 £1,300 Approx





Great value THX Ultra2-certifled array with a classy finish

Highs: Impressive full-range scale and power from relatively small speakers

Lows: Brash and unsubtle; not so good at low volumes

Specifications

Power handling: 2 x 150W, 3 x 100W Rears: Dipoles Subwoofer: 200W Finish: Gloss Bookshelf: No

Tested: Issue 185 For more info visit: www.crystalaudiovideo.com



ACOUSTIC ENERGY

5.1 → Aegis Neo V2 £1,200 Approx



Traditional-looking 5.1 system does the job

Highs: Classy build; sophisticated sound with clean bass tones

Lows: At high volumes there's some slight distortion from the floorstanders

→ Specifications

Power handling: 2 x 170W, 3 x 120W Rears: Direct radiating Subwoofer: 200W Finish: Wood: Bookshelf: No

Tested: Issue 191 For more info visit: www.acoustic-energy.co.uk



5.1 → imagine Series £3,000 Approx









US-made speakers that are well-built and sound great

Highs: Disproportionate bass from tlny sub; fast, impactful highs; dynamic sound; highquality finish

Lows: Subwoofer finish doesn't match the rest of the system

→ Specifications

Power handling: 2 x 200W, 3 x 150W Rears: Direct radiating Subwoofer: 500W Flnish: Wood; Bookshelf: No

Tested: Issue 188 For more info visit: www.armourhome.co.uk



5.1 → Klipsch Synergy B20/SW-4502 £1,000 Approx



Affordable 5.1 array makes use of Klipsch's horn knowhow

Highs: Sensitive and loud speakers; warm and full sound; excellent HF dispersion Lows: Booming bass needs taming; kinda ugly

Specifications

Power handling: 2 x 85W, 3 x 50W Rears: Direct radiating Subwoofer: 450W Finish: Gloss; Bookshelf: Yes

Tested: Issue 189 For more info visit: www.klipsch.co.uk

Also recommended



5.1 → Movie CD 151 £800 Approx









Impressive small-scale system from the German brand

Highs: Compact satellites; crisp and bold sound; punchy subwoofer Lows: Less cohesive soundstage at the rear; not suitable for large rooms

→ Specifications

Power handling: 5 x 120W. Rears: Direct radiating Subwoofer: 120W Finish: Gloss; Bookshelf: Yes

Tested: Issue 189 For more info visit: www.canton.de/en



5.1 → Apex £2,400 Approx







Premium compact 5.1 system offers performance and style

Highs:Intricately detailed, articulate and powerful sound; supermodel looks; build quality Lows: Expensive by normal compact system standards

Specifications

Power handling: 4 x 100. 1x200W: Rears: Direct radiating Subwoofer: 1 x 500W Finish: Gloss; Bookshelf: Yes

Tested: Issue 190 For more info visit: www.monitoraudio.co.uk



Q ACOUSTICS

5.1 → 2000 Series £550 Approx







Excellent 5.1 sub/sat system with living-room friendly looks

Highs: Detailed, compact satellites; alternative finishes/ supports; tweakable sub Lows: Slightly rough sound when extended; lack of highfrequency subtlety

Specifications

Power handling: 4 x 75W, 1 x 100W; Rears: Direct radiating Subwoofer: 140W Finish: Gloss; Bookshelf: Yes

Tested: Issue 185 For more info visit: www.qacoustics.co.uk

Editor's Choice...

5.1 XQ Series £5,000 Approx

2345

mixes standmount surrounds with two hulking floorstanders





Tested: Issue 174

For more info visit: www.kef.com/gb

Specifications

wer handling: 2 x 200W, 2 x 120W, 1 x 150W





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Subwoofers

Best on test...



PARADIGM SW → Seismic 110 £1,200 Approx



Powerful, high-performance 10in sub with quirky styling

Highs: Excellent performance from a compact sub; monstrous power Lows: Not a budget option

→ Specifications

Frequency response: 18Hz-150Hz (claimed) Amplifier: 850W Driver: 10in Weight: 16.8kg Enclosure: Sealed On-board equaliser: No Remote control: No

Tested: Issue 188
For more info visit:
www.paradigm.com



VELODYNE SW → CHT-15Q £1,200 Approx



Potent 15in woofer with excellent EQ system

Highs: Tremendous grip, power, and headroom; supplied remote control Lows: Pretty dull to look at

→ Specifications

Frequency response: 23Hz-12OHz (claimed) Amplifier: 75OW Driver: 15in Weight: 34kg Enclosure: Ported On-board equaliser: Yes Remote control: Yes

Tested: Issue 189
For more Info visit:
www.red-line.co.uk



PARADIGM

SW → Signature Sub 2 £7,250 Approx



Reference grade sub for serious installs only

Highs: Astonishing power, control and speed; build quality is first rate Lows Can you afford one?

→ Specifications

Frequency response: 7Hz-150Hz (clalmed) Amplifier: 4,500W Driver: 6 x 10in Weight: 105.7kg Enclosure: Sealed On-board equaliser: No Remote control: No

Tested: ISSUE 183 For more info visit: www.paradigm.com



BK ELECTRONICS

SW → XXLS400DF £400 Approx



Another excellent affordable sub from the Brit-based brand

Highs: Clean, tight output with 'warm' feel from its Class AB amplification; Lows: Black box design

→ Specifications

Frequency response: 19Hz-120Hz (claimed) Amplifier: 400W Driver: 12in Weight: 29kg Enclosure: Sealed On-board equaliser: No Remote control: No

Tested: issue 191
For more info visit:
www.bekelec.com



REL SW → T3 £430 Approx



Great value-for-money small-scale subwoofer

Highs: Superb performance from such a small unit Lows: Dual input system may irritate some

→ Specifications

Frequency response: 30-120Hz (claimed) Amplifier: 150W Driver: 8in Weight: 12.5kg Enclosure: Sealed On-board equaliser: No Remote control: No

Tested: Issue 186 For more info visit: www.rei.net

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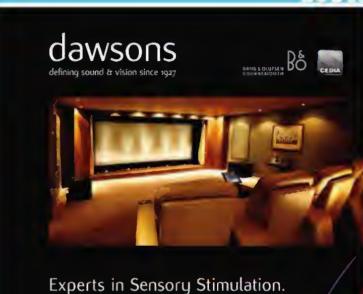
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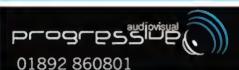
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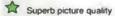
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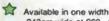
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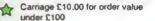
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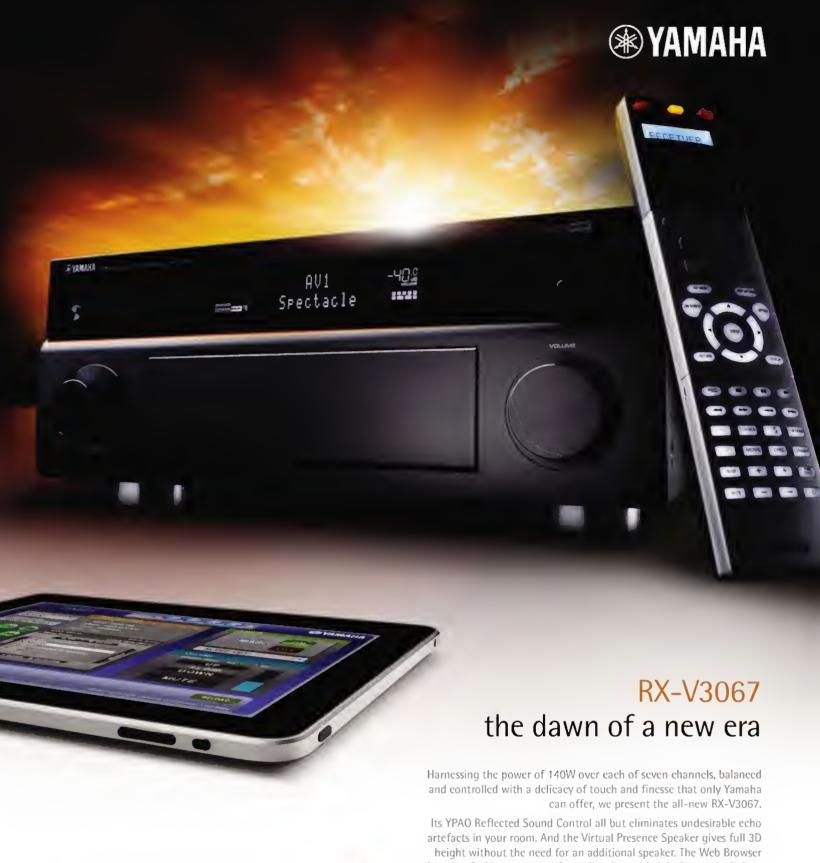












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